



Peter Fischer

ROCK GUITAR SECRETS

Warm Ups
Arpeggios, Modes
Three-Notes-
per String-Scales
String Skipping
Sweeping
Two Hand Tapping
Whammy Bar
Bending, Vibrato and
Legato Techniques
How to build a Solo
Jam Tracks
and much more

CD included

AMA
VERLAG

Hello and welcome to Rock Guitar Secrets.

Rock guitar secrets ... is there really such a thing? The cult that has always been built around every important rock guitarist seems to lend them a mystical quality. Of course, any thing unknown always has an aura of mystery about it until one takes a closer look at it. And that's exactly what I intend with this book; to finally lift the veil from around the so-called "secrets" of rock guitar playing, if such things really exist. In the course of this book you'll find that most of these so-called secrets are relatively simple concepts or tricks which can easily be learned by anyone. Combining them skilfully and developing a sensible, individually-g geared practice plan while working with this book will work the real "magic".

As is my first book "**Masters of Rock Guitar**", "**Rock Guitar Secrets**" is put together modularly, meaning that you can pick out sections at will. If you've "always wanted to learn something about two-hand tapping or the melodic minor scale", no problem! As it's not necessary to follow a set order of modules, each chapter is complete in itself, you can jump in spontaneously wherever you want. You don't have to have read the chapter on pentatonic scales in order to be ready to work with the section on the use of the vibrato arm.

Of course you can also work through **Rock Guitar Secrets** from beginning to end, using it as a rock guitar "method".

The real idea behind the modular design, though, is to help you to develop your own practice program. You'll find suggestions on how to put one together in chapter 18: "Effective learning - practice planning".

Compared to the rock music world of ten or fifteen years ago, demands on guitar players' abilities are much greater today. Modern guitarists such as **Steve Vai** and his cohorts have infused the music with new concepts (eg. playing with **arpeggios**, **3-note-per-string scales**, and **string skipping**, to name just a few). Since I myself, a "working" guitarist, ardent researcher and student of the instrument, have yet to come across a book that deals with such innovative ideas, I felt it was time to write one that describes these concepts in a thorough and easily understandable manner.

To me, **Rock Guitar Secrets**, also means peering beyond the harmonic limitations of the music to see how demanding (actually jazz-derived) improvisational concepts, used today by guitarists like **Satriani**, **Vai** or **Kee Marcello**, can be employed in rock. In order to put them directly into practice, you'll find on the accompanying CD not only over eighty **licks** and **exercises**, but more than twenty **jam tracks** as well, playbacks without melodies, solos and licks, with which you can practice and apply the licks yourself.

If you look at the table of contents you will see that, beside all the standard **playing techniques**, easy to intermediate **improvisational concepts** are also included, so that **Rock Guitar Secrets** can also function as a comprehensive textbook for the modern guitar soloist.

At this point I would like to thank a number of people who have made my life and the writing of this book much easier: Birgit Fischer, Olaf Krüger, the Musicians Institute, Hollywood (especially Dan Gilbert and Carl Schroeder), as well as Frank Haunschild.

For inspiration of all sorts I thank Peter Paradise, Mick Goodrick, Steve Vai, Paul Gilbert, Albert Collins and Steve Lukather, as well as all my guitar students.

LOVE, PEACE and the **UNIVERSE**
PETER FISCHER

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SIX TIPS FOR PRACTICING

Before we get to the first chapter, here are a few ideas about effective studying and practicing that I feel have made guitar playing easier for me.

PRACTICING DAY AND NIGHT?

Do your practising at that time of day (or night) which is individually just the right time for you! For some, the morning is better, for others (me, for example) late at night. What's important is to find a healthy balance of discipline and the desire to play. If you've had a bad day and haven't practiced, it's not the end of the world. The best thing is to work with a daily practice program (see pg. 149). It's also important to keep two days a week practice-free for things like jamming, in order to give your head time to assimilate and process what you've been practicing.

LEARNING IN LITTLE "CHUNKS"

It should be clear that, in principle, the study of the guitar (as well as every other instrument) is divided into two phases. One is the cognitive, meaning the mind - oriented learning process, for example the understanding and absorbing of a lick, a solo, a scale, or a particular technique. The other phase is the motoric learning process, the practical application, the actual playing and practicing until you've got what you've learned under your fingers.

These two approaches should be kept separate and practiced in completely different ways.

Modern research on learning has shown that an adult can concentrate on a particular subject for about two minutes. Pretty short, isn't it? So try to break up what you're learning into small pieces. You'll find that you'll get a lot further that way, and that it's easier to connect many little bits later on into a bigger piece than it is to swallow that big piece all at once. And believe me the smaller the pieces are, the faster and bigger the results will be. Try to really master the material before going on to the motoric phase. Here it's also important to try to avoid making the same mistake twice. If you're having trouble, maybe the chunks were too big.

Nothing hinders progress more than an overload.

Things are a bit different with the other phase. Once you've understood one of these "chunks" (for example, the first five notes of a scale) you can practice it as long as you wish, until you've attained the speed you want or until you drop from exhaustion. You should bear in mind that this means you can only play it better, and not that you understand it better. The actual cognitive learning process should only be a matter of two minutes at most and not more.

LONG AND SHORT TERM GOALS

Set yourself goals, and try to maintain them!!

Its important to distinguish between long and short-term goals. A long-term goal could be, for example, learning how to improvise fluently through difficult chord changes. This task can be divided up into work on scales, arpeggios, etc. These can be further broken down into individual positions, and so on. What's important is that you set these goals, no matter how modest they may be, formulating them in words or perhaps even writing them down, and that you try to attain them instead of just practicing aimlessly. Remember:

Every long journey begins with the first step!

PRACTICING MORE AND GETTING WORSE?

If you practice a lot you'll regularly get the feeling that you're getting worse instead of better. **THIS IS NORMAL!** This is a sign that your brain needs energy to assimilate the new material. Don't get uptight. As soon as your head is free again, this feeling will disappear. You'll find that your old licks, plus the new ones, will work again when this process is completed.

DO IT YOURSELF!

This is a "do it yourself" book.

Like guitar lessons, or other guitar books, this book can merely give you theoretical and technical tips and suggestions. This book will not teach you how to play the guitar! You have to do that yourself. There's no way around it. You have to take the guitar in your hands, play it and get better. All my book can do is to make the going a bit easier.

MUSIC IS FUN!

This is the most important realization I've come to: **music is fun.**

Even if you've got great ambitions as a guitarist or see the guitar as your life's focal point, have fun with it and try to experience the music as something beautiful without weighing it down with unnecessary seriousness.

If you still find yourself on a downer, imagine, from this moment on, **never** being able to play again ... Feel better now?

TABLE OF SUBJECTS

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1. Warm-ups	Note location, Chromatic scales, the spider. Quasi-chromatic scale	Warm-up exercises, Synchronization, Right and left hand exercises
2. Pentatonic scales	Major and minor pentatonic, Positions, 3-notes-per-string, Stretch pentatonics	Fingerings, Scale sequences, Licks, Jam tracks, Projects
3. The Blues scale	Blues scale, Blue notes, Positions	Fingerings, Licks, Jam tracks
4. String-bending	Bending and vibrato, Starting Vibrato note, Target note, Supportive fingering	Smear (small) bend, Release bend, Unison bend, Muting with the left hand, Classical vibrato, Circle vibrato, Rock vibrato, Jack-off vibrato, Vibrato with the tremolo arm, Licks, Projects
5. The major scale	Major scale, Positions	Fingerings, Licks, Projects, Jam tracks
6. Alternate picking	Alternate picking, 3-notes-per-string scales,	Practice tips, Exercises and sequences on one or more Rhythm pyramid-strings, Scale sequences, Pedal tone licks, Paganini's "Moto Perpetuo". Mega-chops
7. Modes of the	Modal theory, 3-notes-per-string scales, major scale Modal chord progressions, Modal scale timbres, Pitch axis theory	Fingerings, Scales and theory drill, Jam tracks, Projects
8. Legato technique	Hand positioning and playing technique, Shapes	Hammer-ons, Pull-offs, Slides, Speed exercises, Legato sequences, 3-notes-per-string shapes
9. Triadic arpeggios	Major and minor triads	Fingerings, Exercises, Licks, Projects
10. Economy	Playing technique, Muting picking technique, Sweeping and 3-notes-per-string scales, Sweeping and arpeggios	Speed exercises, Licks

CHAPTER	THEORY	PRACTICE
11. Four-note arpeggios	Diatonic chords of the major scale, Construction and use of four-note arpeggios (maj ⁷ , m ⁷ , dom ⁷ , m ^{7b5}) Arpeggiating chord progressions, Extended arpeggios. the Jan Hammer scale, Chord substitutions	Fingerings, Short and long form fingerings, Projects, Licks, Jam tracks
12. String-skipping technique	String-skipping and scales, String-skipping and arpeggios	Speed exercises, Arpeggio sequences, Repeating patterns, Licks
13. Two-hand tapping	Hand position and playing technique, Two-hand scales, Two-hand arpeggios, Two-hand chords, Harmonic tapping	Speed exercises, Scale and arpeggio fingerings, 8-finger tapping, Sequences, Licks, Projects
14. The harmonic minor scale	Construction and use of the harmonic minor, Diatonic chords of the harmonic minor	3-notes-per-string fingerings, Jam tracks, Projects
15. The melodic minor scale	Construction and use of the melodic minor, Diatonic chords of the melodic minor	Conventional and 3-note-per-string fingerings, Licks, Mega-chops exercise, Projects
16. Exotic scales	Whole tone scale, Diminished scale, Oriental scales, the Enigmatic scale	Fingerings, Licks. Jam tracks
17. The tremolo arm	Tremolo arm history and technique	Vibrato, Melodies with the tremolo arm, Whammy-bar effects, Dive bomb, Wang- bar dips, Legato phrasing
18. Practice planning	Long and short-term goals, Ideas and tips ve for creati practicing	Practice plan, Creative exercises, Projects
19. Improvisation - Solo construction	Analysis and construction of solo types	Pop song concept solo, Rock/hard rock solo, Extended improvisations, Ear exercises, The intensity pyramid
Appendix	Reading and listening tips, Records, Books, Magazines, Videos.	

CHAPTER 1

WARM UPS

Note Location
Chromatic Notes
The Spider

A good point of entry into the world of guitar secrets is a short but effective warm-up program. In my opinion, it's very important to continually re-discover the instrument and to warm yourself up before getting into your own thing like licks or exercises played at the speed of light. One of my "secrets" is to try to practice a number of different things with one exercise. Let's get away from separating technique and warm-ups and theory and so on, and get into an integrated style of practice that's much more effective and **time-saving**. With this in mind, let's look at the first exercise.

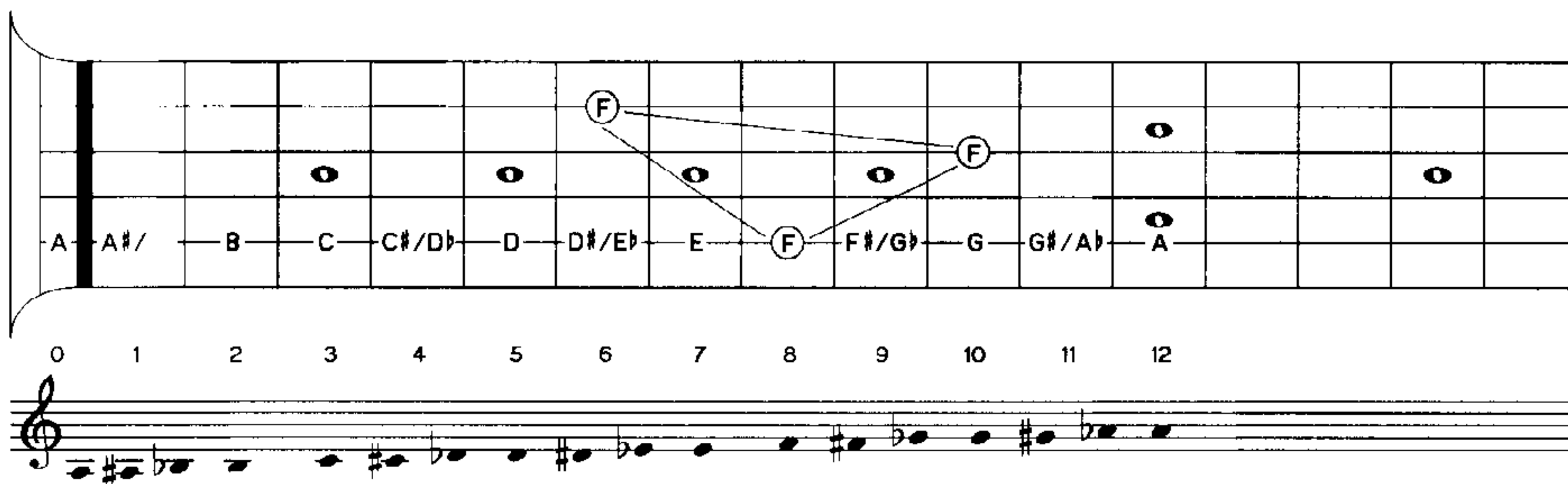
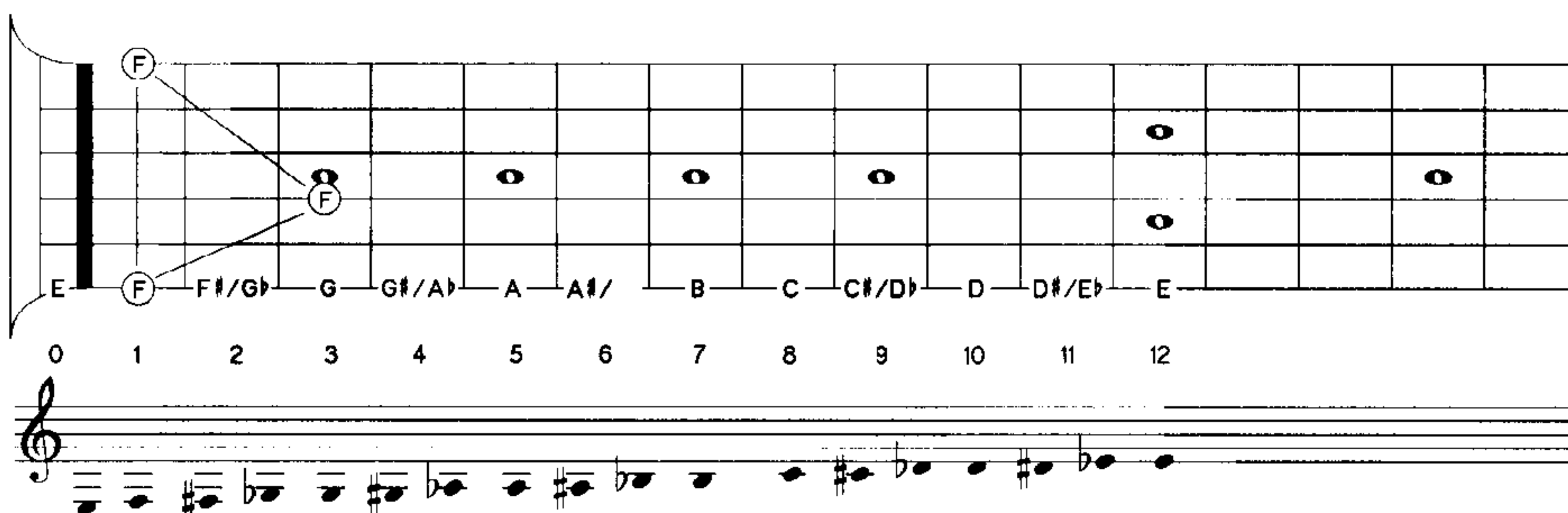
NOTE LOCATION – THE MAGIC TRIANGLE

Let's be honest now: Do you know all the notes on the fingerboard? Or are there parts of your guitar neck that are still "foggy zones" for you? Here is my radical cure for this problem:

On these two diagrams of the fingerboard the notes on the E string and the A string are written. This order of the notes must be learned by heart; with the help of the two triangles you'll be able to locate every note on the neck with ease.

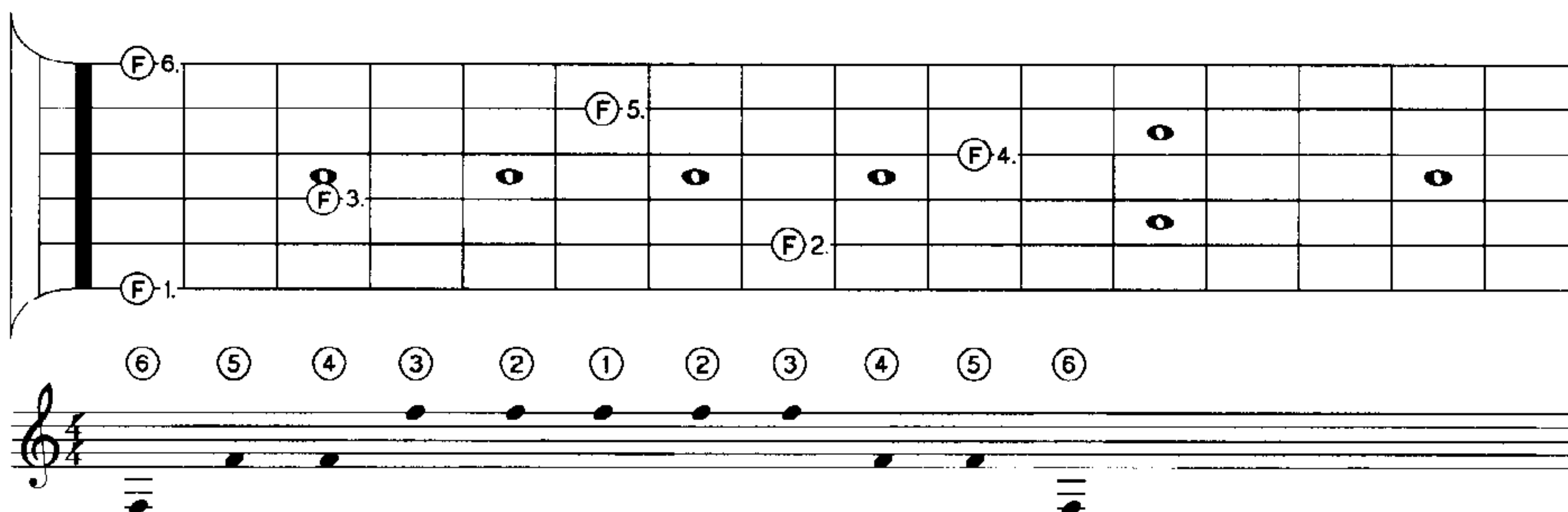
For example, an F note:

I simply put in position the two triangles starting from the F notes which lie on the E or A strings.



Each triangle covers three strings (E - D- E strings or A -G -B strings). You can now find all the F notes within the first 12 frets. Now number all the F's (see the next diagram) and try to get a feeling for where they are.

Note: If a note falls on an open string, play it instead on the 12th fret, OK?!



Set the metronome on 45 beats per minute and play your series of notes in their "numbered order" This gives you practice in a variety of skills:

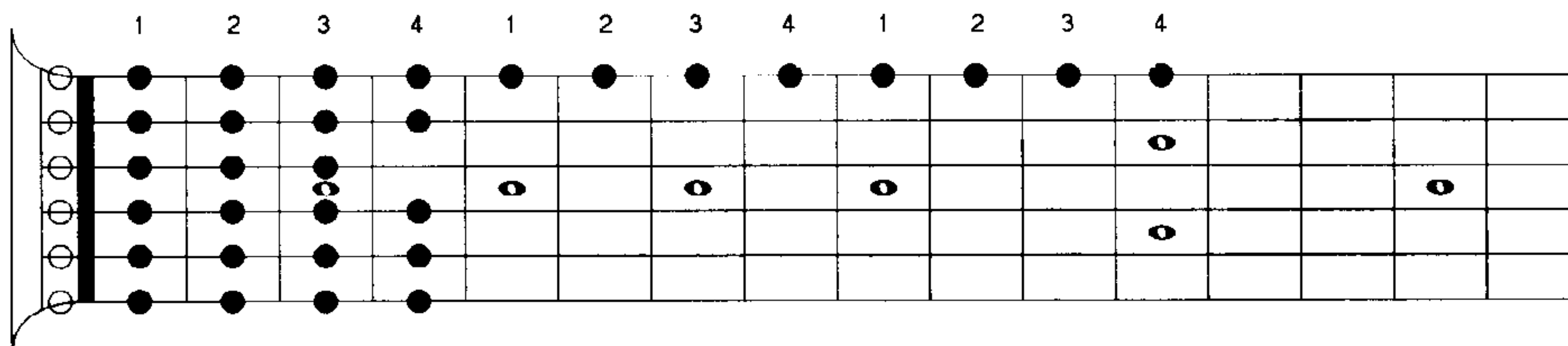
1. You get to know the notes on the fingerboard.
2. While you're playing a note you already have to visualize the next one, thus learning to play and think ahead ... an important skill in every area of music.
3. You slowly but surely get your muscles in gear, and warm yourself up "megaslowlly".

PROJECT:

- At every practice session add only two new notes to work on.
- Practice each note ca. 2 minutes.
- Check briefly to make sure that you still know the notes from the previous session.
- As mentioned above, you should start with the metronome set at about 45 b p m; I'd say that within a few weeks you should be able to work up to about 100. Increase the speed only gradually so as to give yourself time to improve.

THE CHROMATIC SCALE

Now we go on to the second part of our warm-up program, the **chromatic scale**. The chromatic scale is the half-tone scale, that is, all the twelve tones that exist in our tempered note system are played one after the other. Although this scale is used in improvisation to connect ideas and for adding more color to melodies, we're going to use it as a technical exercise. Here it is written out on the diagram:



THE SPIDER

This first exercise I always call "The Spider":

Play the 1-2-3-4 fingering on every string. What's difficult here is that on changing from one string to the next, the finger should be placed on the next string while the other fingers are in a row. (Until they're needed they should rest on the previous string). Here too, the slower the better.



A nice side effect to this warm-up is that it automatically trains the left hand to use very small movements, which later pays off at higher speeds. (Time: about 5 minutes).

FINGERING VARIATIONS WITH THE "QUASI-CHROMATIC" SCALE

Now you can start to increase your speed a bit, with a series of synchronization exercises for the right and left hand derived from the "quasi-chromatic" scale. These are finger combinations that you can select at will and play up and down the neck. Use your imagination and invent some new combinations!

	Up	Down
a)	1-2-3-4	1-2-3-4
b)	1-2-3-4	4-3-2-1
c)	4-3-2-1	4-3-2-1
e)	1-4-2-3	4-1-3-2
f)	1-3-2-4	4-2-3-1

At every practice session take a new combination and practice it for about five minutes.

Here is the complete warm-up program:

Note location	: 5 minutes
Chromatic scales	: 5 minutes
The Spider	: 5 minutes
Quasi-chromatic	: 5 minutes

20 minutes of warm-up exercises

Try to stick exactly to the times given in the course of the book, as a lot of relatively unimportant things are practiced too long while really important items like warm-ups usually get cut short or are even totally neglected.

Twenty minutes is actually a very short period of time, and, as you've already seen, these exercises are also useful in other areas.

Now that you're warmed up, let's go on to the next chapter: **Pentatonic scales.**



CHAPTER 2

PENTATONIC SCALES

Stretch pentatonic

Sequences

Jam tracks

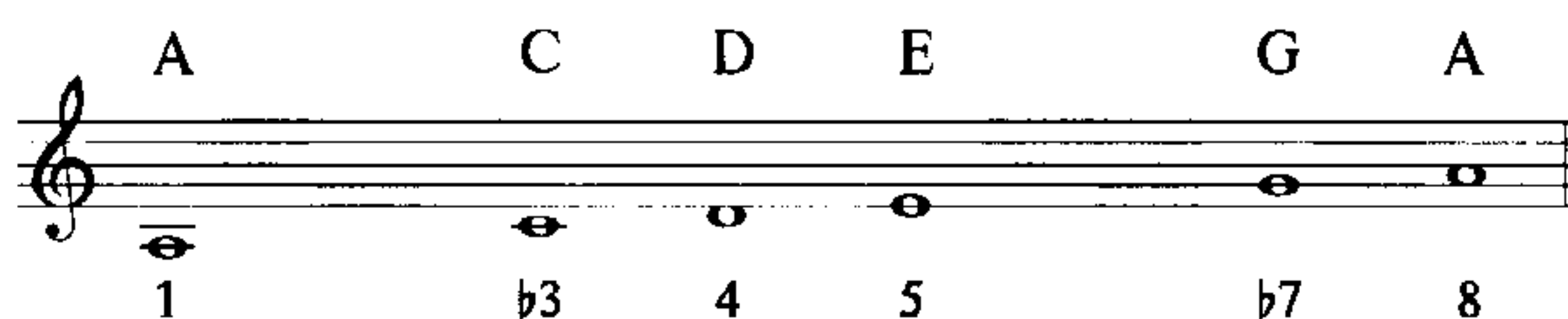


The prefix "penta" comes from the Greek word for five, so the pentatonic scale is a scale with five notes. For me, the simplest way to think of the pentatonic scale is as a major or minor scale without the half steps:

A minor scale



A minor pentatonic



THE FIVE POSITIONS OF THE PENTATONIC SCALE

The pentatonic scale is one of the most frequently used scales in just about any style of music, so it's very important to be able to master it. Here are the five positions of the C major (or A minor) pentatonic. To keep things a bit clearer, I've only circled one root note, the A. Just remember that the A minor pentatonic and the C major pentatonic contain the same notes; they simply start on different steps of the scale.

A minor scale

C major scale



A minor pentatonic

C major pentatonic



The following scale diagrams show the A minor pentatonic (or C major pentatonic) played in different positions along the fingerboard. The notes are always the same.

Pattern 1

● = Root note

Pattern 1: A 6-string fretboard diagram and a corresponding musical staff. The fretboard shows notes at frets 1, 2, 3, 5, 7, and 9. The root note is at fret 2. The musical staff shows the notes in a single octave: C2, D2, E2, F2, G2, A2.

Pattern 2

Pattern 2: A 6-string fretboard diagram and a corresponding musical staff. The fretboard shows notes at frets 2, 3, 4, 6, 8, and 10. The root note is at fret 3. The musical staff shows the notes in a single octave: D2, E2, F2, G2, A2, B2.

Pattern 3

Pattern 3: A 6-string fretboard diagram and a corresponding musical staff. The fretboard shows notes at frets 3, 4, 5, 7, 9, and 11. The root note is at fret 4. The musical staff shows the notes in a single octave: E2, F2, G2, A2, B2, C3.

Pattern 4

Pattern 4: A 6-string fretboard diagram and a corresponding musical staff. The fretboard shows notes at frets 4, 5, 6, 8, 10, and 12. The root note is at fret 5. The musical staff shows the notes in a single octave: F2, G2, A2, B2, C3, D3.

Pattern 5

Pattern 5: A 6-string fretboard diagram and a corresponding musical staff. The fretboard shows notes at frets 5, 6, 7, 9, 11, and 13. The root note is at fret 6. The musical staff shows the notes in a single octave: G2, A2, B2, C3, D3, E3.



SEE IT, FEEL IT, TOUCH IT, TASTE IT!!

In order to get into a scale, it's important to experiment with it, and not just to apathetically play it up and down. In other words: **SEE IT, FEEL IT, TOUCH IT, TASTE IT**. Try, for example, some scale sequences. Scale sequences are series of notes that can be repeated on different steps of the scale. They are often categorized by intervals (e.g. in thirds) or by rhythmic groupings (e.g. groups of three).

TECHNICAL EXERCISES

Here are some exercises that I find particularly useful and good sounding for pentatonic scales.

Exercise 1 (groups of 3)

Exercise 2 (groups of 4)

The musical score for 'The Rose Tree' is presented in three staves. The top staff is a treble clef melody in 4/4 time, featuring a series of eighth-note runs. The middle staff is a tenor clef accompaniment, and the bottom staff is a bass clef accompaniment. Both accompaniment staves use a 'T A B' system with fret numbers (5, 7, 8) and include a 'T' (thumb) indicator. The score is divided into two measures by a double bar line, with 'etc.' written at the end of each measure. The key signature has one sharp (F#), and the time signature is 4/4.

Exercise 3 (fourths)

Exercise 5 (fourths grouped in triplets)

PENTATONIC LICKS

Whereas the sequences above are more of a technical nature, the pentatonic scale can be used to provide an endless source of licks. Try these:

Lick 1

2
CD INDEX

The first system of musical notation is for the treble clef. It is in 4/4 time and features a key signature of one flat (B-flat). The melody begins with a whole note chord of A3, C4, and E4, labeled 'Am7'. This is followed by a quarter note G4, a quarter note F4, and a quarter note E4, all beamed together and marked with a '3' for a triplet. The melody then continues with a quarter note D4, a quarter note C4, and a quarter note B3, also beamed together and marked with a '3'. The system concludes with a whole note chord of A3, C4, and E4, labeled 'Am7'.

Lick 2



Am⁷

BU BU BU BU BU RB

TAB 7 (9) 5 7 (9) 5 7 (9) 5 7 (9) 5 7 (9) 5 8 7 5 (9) 7 5 7 7 5

Lick 3



Am⁷

Sm Sm Sm Sm BU BU Sm Sm

TAB 7 5 7 5 7 5 7 5 7 (9) 5 8 7 (9) 5 5 7 5 5 7

Lick 4



Am⁷

BU BU

TAB 10 (12) 8 10 9 10 8 (10) 10

Lick 5



Am⁷

H H P H H P BU

TAB 10 12 13 10 13 10 13 12 10 12 9 12 12 9 12 (14)

To give these licks more meaning, it's important to play them with a background. Record the following chord progressions on tape and jam along until you've got the scales and licks under your fingers.

Jamtrack 1



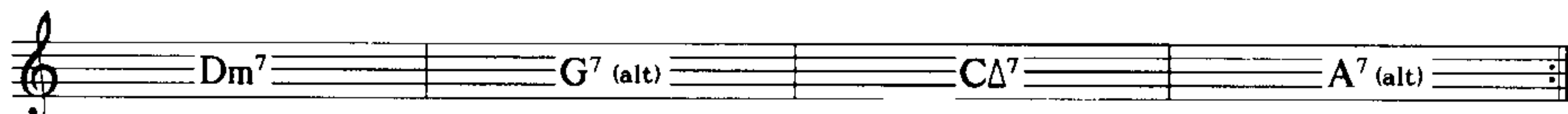
- a) A minor pentatonic ✗
- b) A dorian ✗
- c) A aeolian ✗

Jamtrack 2



- a) A minor/C major pentatonic ✗ ✗ ✗
- b) B minor pentatonic A minor pentatonic B minor pentatonic A minor pentatonic

Jamtrack 3



- a) A minor pentatonic ✗ ✗ ✗
- b) A minor pentatonic Bb minor pentatonic B minor pentatonic C minor pentatonic
- c) E minor pentatonic F minor pentatonic E minor pentatonic G minor pentatonic

PROJECT:

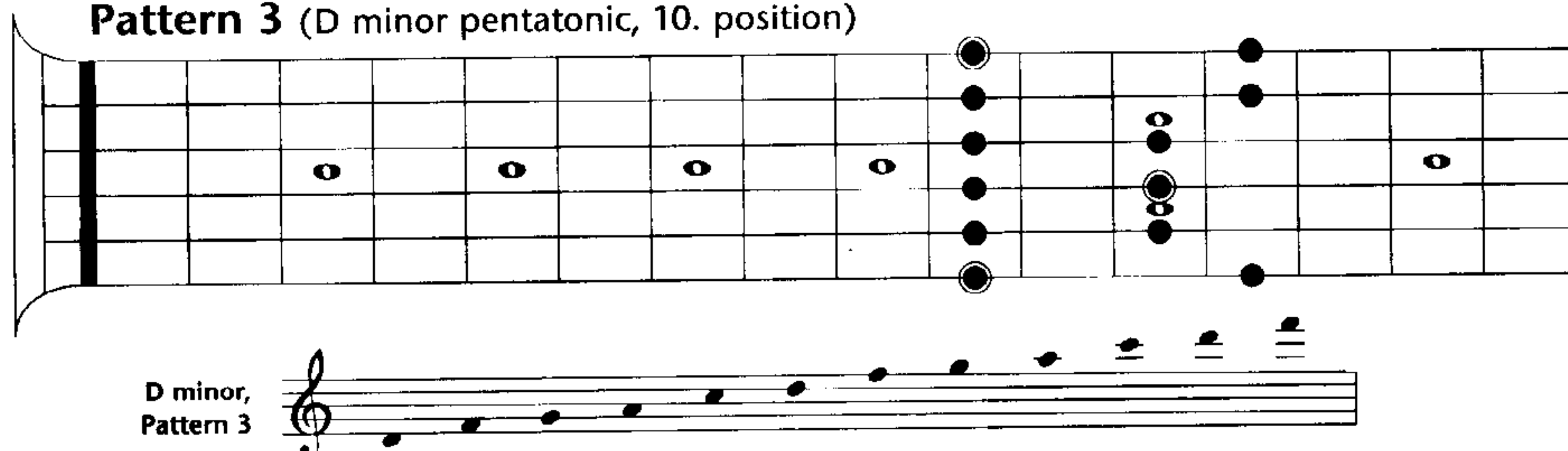
- Learn the five fingerings of the pentatonic scale.
- Transpose them to other keys
- Invent some licks of your own and show them to your guitar playing friends.
(Showing and trading among musicians is very important).
- Use the scales to improvise over chord changes that you already know.
- Play the pentatonic scale on a single string (horizontally, that is).
Try this on all strings; slides on one string are a good way of changing position on the fingerboard without too much effort.



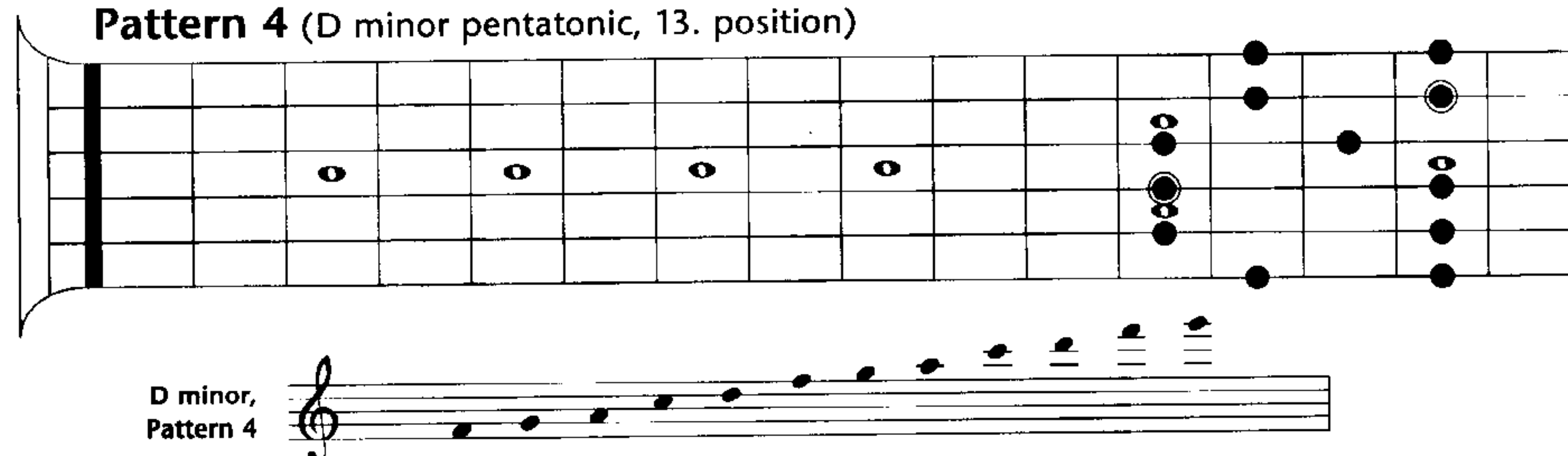
STRETCH PENTATONIC

A more modern-sounding variation of the above-mentioned traditional 2-note-per-string fingering for the pentatonic scale is the stretch pentatonic with three notes per string, often used by guitarists like Alan Holdsworth or Zakk Wylde. Here, two neighboring pentatonic fingerings are combined into one pattern.

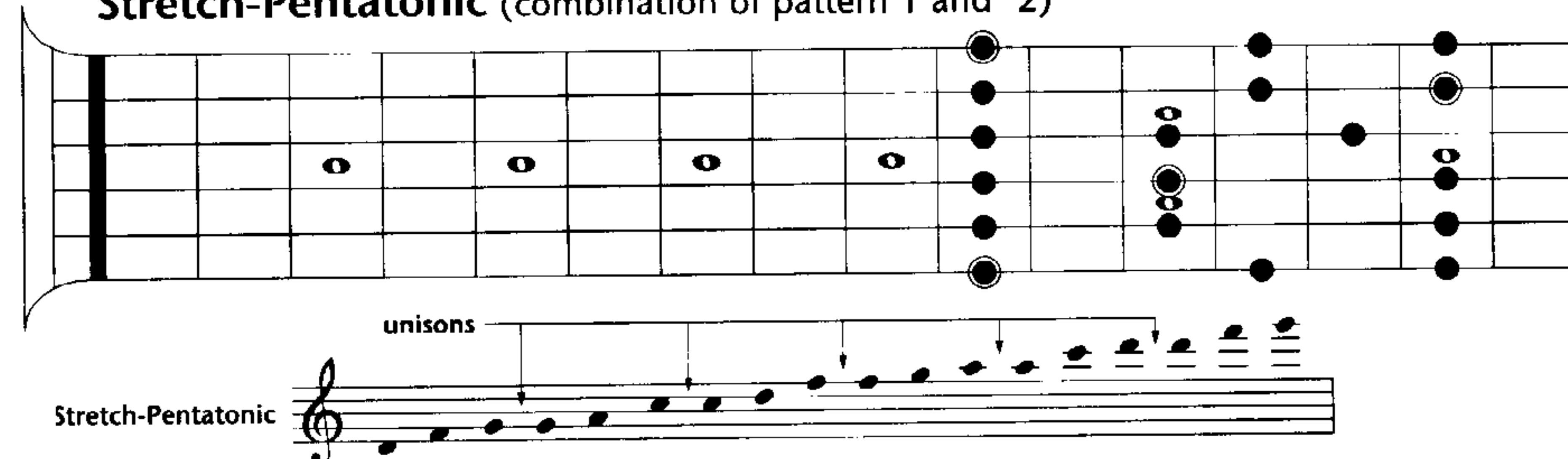
Pattern 3 (D minor pentatonic, 10. position)



Pattern 4 (D minor pentatonic, 13. position)



Stretch-Pentatonic (combination of pattern 1 and 2)



By using the unison intervals, very modern-sounding licks can be made out of simple sequences (see chapter 6, pg. 52, and chapter 8, pg. 71).

TIP:

Further lick material with pentatonics can be found in my book "Masters of Rock Guitar", in the chapters on the following guitarists:

B.B. King – Solo 1 (pg. 14); **Jimi Hendrix** – Lick 3, 4 (pg. 33);

Eric Clapton – Lick 1, 3, 5, 8, 9 (pg. 39–42); **Jimmy Page** – Lick 5, 6, 9, 10, 11 (pg. 55–57);

Carlos Santana – Lick 8 (pg. 69); **Steve Lukather** – Lick 3, 11 (pg. 128, 130);

Joe Satriani – Lick 7 (pg. 137); **Steve Vai** – Lick 4, 5, 8 (pg. 144–146).

CHAPTER 3

THE BLUES SCALE

Blue notes

Positions

Licks

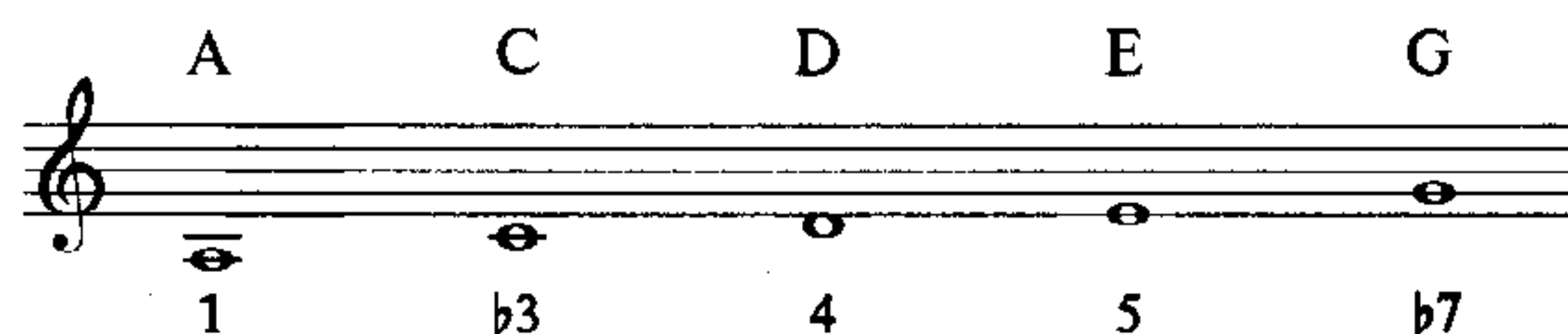


There are those who say that there is no such thing as a blues scale. Either you have the blues or you don't. Ok ... these are "wise words", but not very helpful when you're learning how to improvise. It's certainly true that you can't learn the feeling for the blues from a book. You have to spend hours listening to and jamming along with **Hendrix**, **Stevie Ray Vaughan** or the old blues masters like **B.B. King**, **Albert King** and **Muddy Waters**. But the term "blues scale" has found worldwide acceptance, so I'll use it, too.

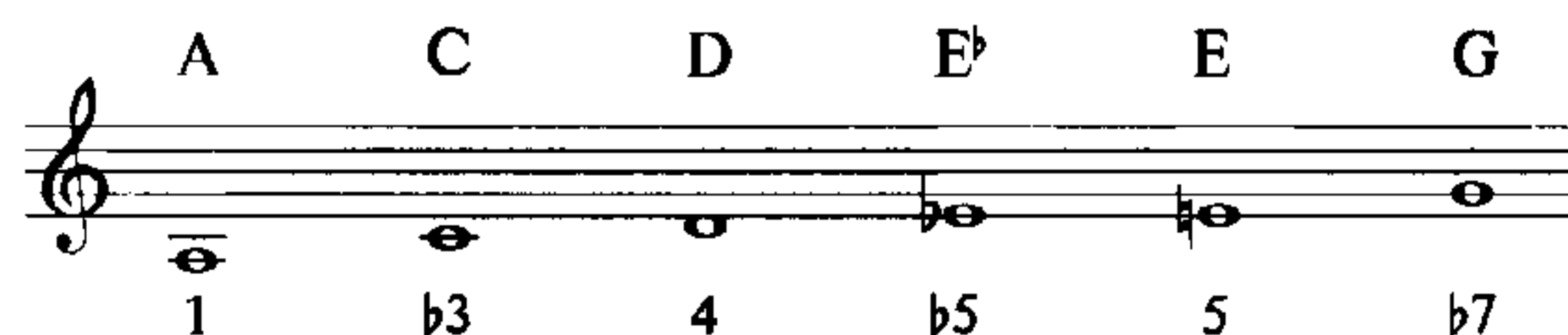
THE FLATTED FIFTH - THE BLUE NOTE

The blues scale is a very important device for improvising, very similar in construction to the pentatonic scale (the minor pentatonic, to be exact). The only difference lies in the addition of the blue note, the flatted fifth, meaning the chromatic note between the fourth and the fifth. This note removes the slickness from the pentatonic scale and gives it more of a rock feeling. The flatted fifth is the most dissonant and tension-filled interval in music. Used effectively, it can give your playing a lot of color.

A minor pentatonic



Blues scale

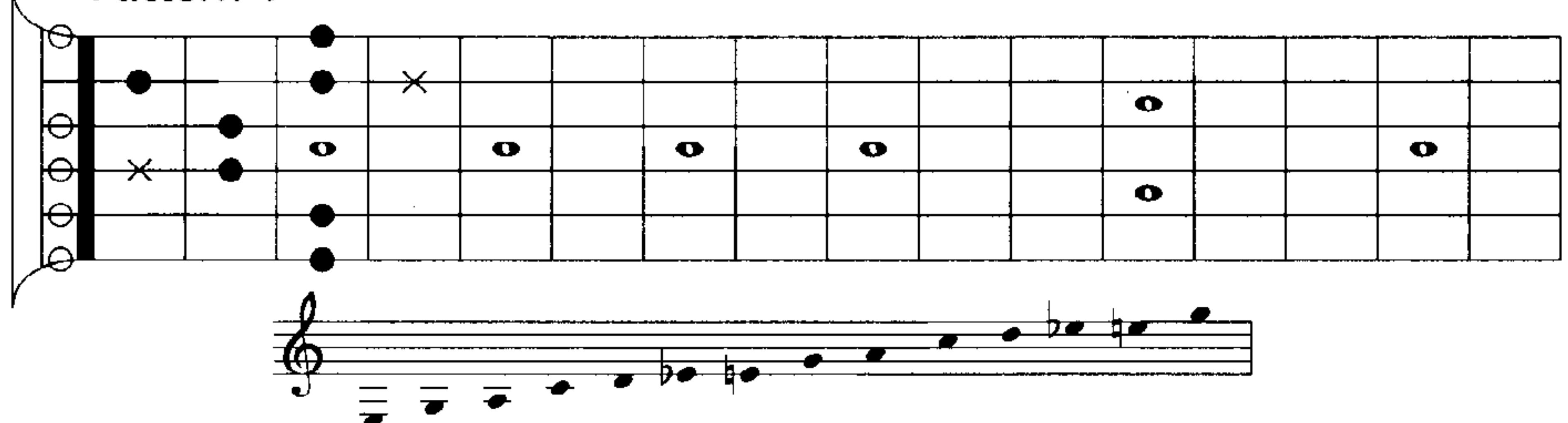


THE FIVE POSITIONS OF THE BLUES SCALE

Here are the five positions of the blues scale. I've put special emphasis on the blue notes by marking them with an x.

A tip: instead of seeing them as "new", try to see them as your familiar pentatonic scales with an additional note (the flatted fifth). It will make things much easier.

Pattern 1



Pattern 2

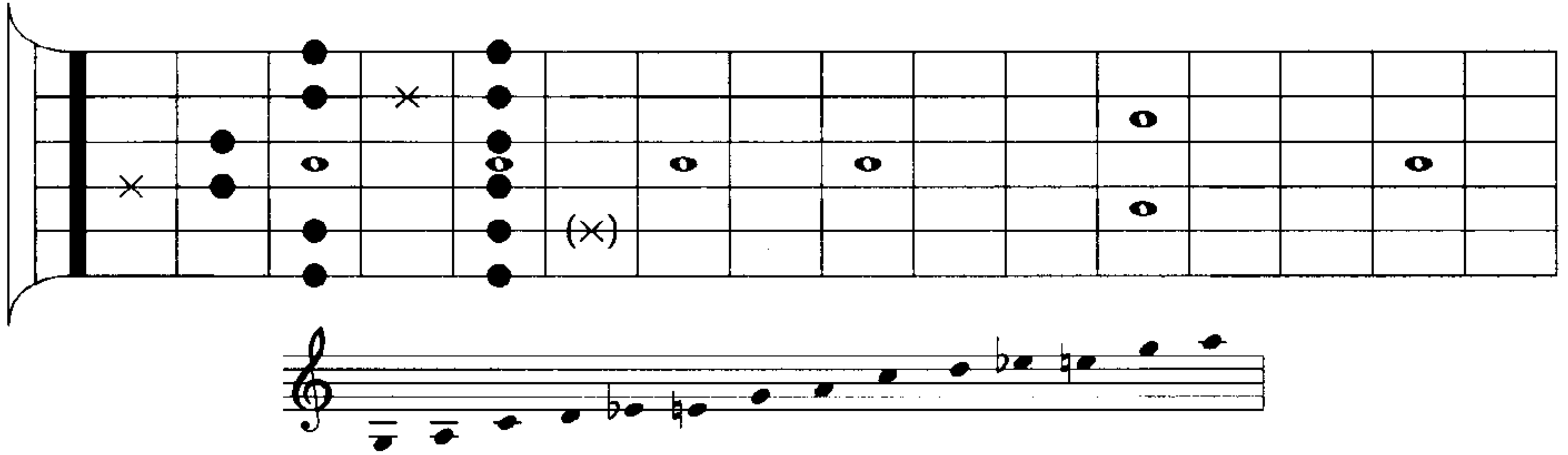


Diagram of Pattern 2 on a fretboard (6 strings, 24 frets). The pattern consists of the following frets and strings (from top to bottom): 1st fret (1st string), 2nd fret (2nd string), 3rd fret (3rd string), 4th fret (4th string), 5th fret (5th string), 6th fret (6th string), 7th fret (1st string), 8th fret (2nd string), 9th fret (3rd string), 10th fret (4th string), 11th fret (5th string), 12th fret (6th string), 13th fret (1st string), 14th fret (2nd string), 15th fret (3rd string), 16th fret (4th string), 17th fret (5th string), 18th fret (6th string), 19th fret (1st string), 20th fret (2nd string), 21st fret (3rd string), 22nd fret (4th string), 23rd fret (5th string), 24th fret (6th string). The pattern is marked with 'x' at the 1st fret (1st string), 4th fret (4th string), 7th fret (1st string), 10th fret (4th string), 13th fret (1st string), 16th fret (4th string), 19th fret (1st string), and 22nd fret (4th string). The musical notation below shows the scale in G major, starting on G4 and ending on G5, with the following notes: G4, A4, B4, C5, D5, E5, F#5, G5.

Pattern 3

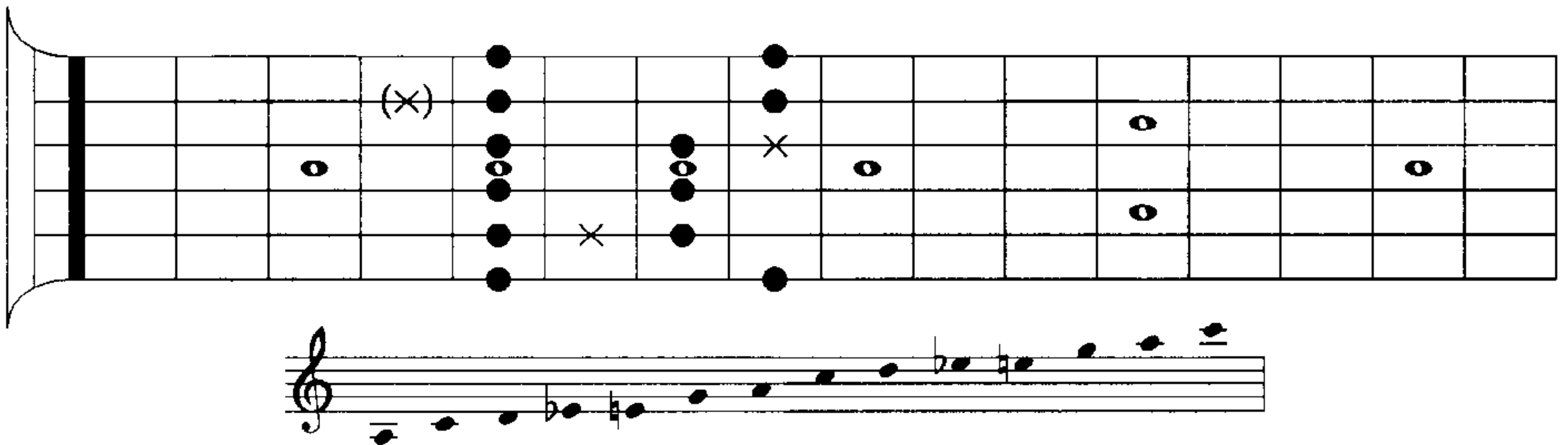


Diagram of Pattern 3 on a fretboard (6 strings, 24 frets). The pattern consists of the following frets and strings (from top to bottom): 1st fret (1st string), 2nd fret (2nd string), 3rd fret (3rd string), 4th fret (4th string), 5th fret (5th string), 6th fret (6th string), 7th fret (1st string), 8th fret (2nd string), 9th fret (3rd string), 10th fret (4th string), 11th fret (5th string), 12th fret (6th string), 13th fret (1st string), 14th fret (2nd string), 15th fret (3rd string), 16th fret (4th string), 17th fret (5th string), 18th fret (6th string), 19th fret (1st string), 20th fret (2nd string), 21st fret (3rd string), 22nd fret (4th string), 23rd fret (5th string), 24th fret (6th string). The pattern is marked with 'x' at the 1st fret (1st string), 4th fret (4th string), 7th fret (1st string), 10th fret (4th string), 13th fret (1st string), 16th fret (4th string), 19th fret (1st string), and 22nd fret (4th string). The musical notation below shows the scale in G major, starting on G4 and ending on G5, with the following notes: G4, A4, B4, C5, D5, E5, F#5, G5.

Pattern 4

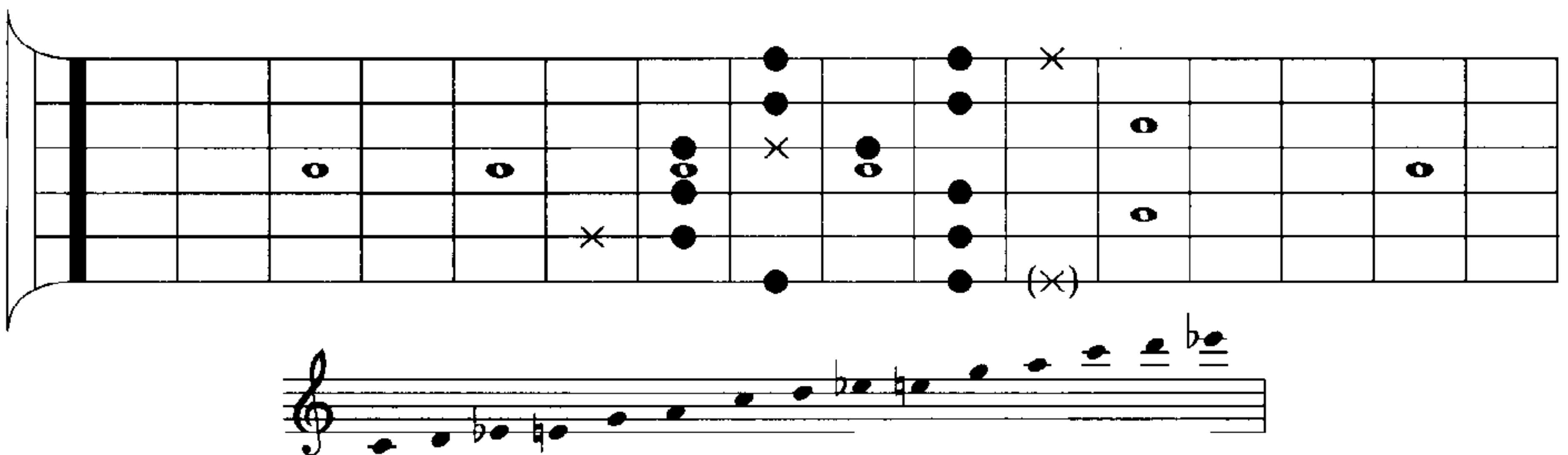


Diagram of Pattern 4 on a fretboard (6 strings, 24 frets). The pattern consists of the following frets and strings (from top to bottom): 1st fret (1st string), 2nd fret (2nd string), 3rd fret (3rd string), 4th fret (4th string), 5th fret (5th string), 6th fret (6th string), 7th fret (1st string), 8th fret (2nd string), 9th fret (3rd string), 10th fret (4th string), 11th fret (5th string), 12th fret (6th string), 13th fret (1st string), 14th fret (2nd string), 15th fret (3rd string), 16th fret (4th string), 17th fret (5th string), 18th fret (6th string), 19th fret (1st string), 20th fret (2nd string), 21st fret (3rd string), 22nd fret (4th string), 23rd fret (5th string), 24th fret (6th string). The pattern is marked with 'x' at the 1st fret (1st string), 4th fret (4th string), 7th fret (1st string), 10th fret (4th string), 13th fret (1st string), 16th fret (4th string), 19th fret (1st string), and 22nd fret (4th string). The musical notation below shows the scale in G major, starting on G4 and ending on G5, with the following notes: G4, A4, B4, C5, D5, E5, F#5, G5.

Pattern 5

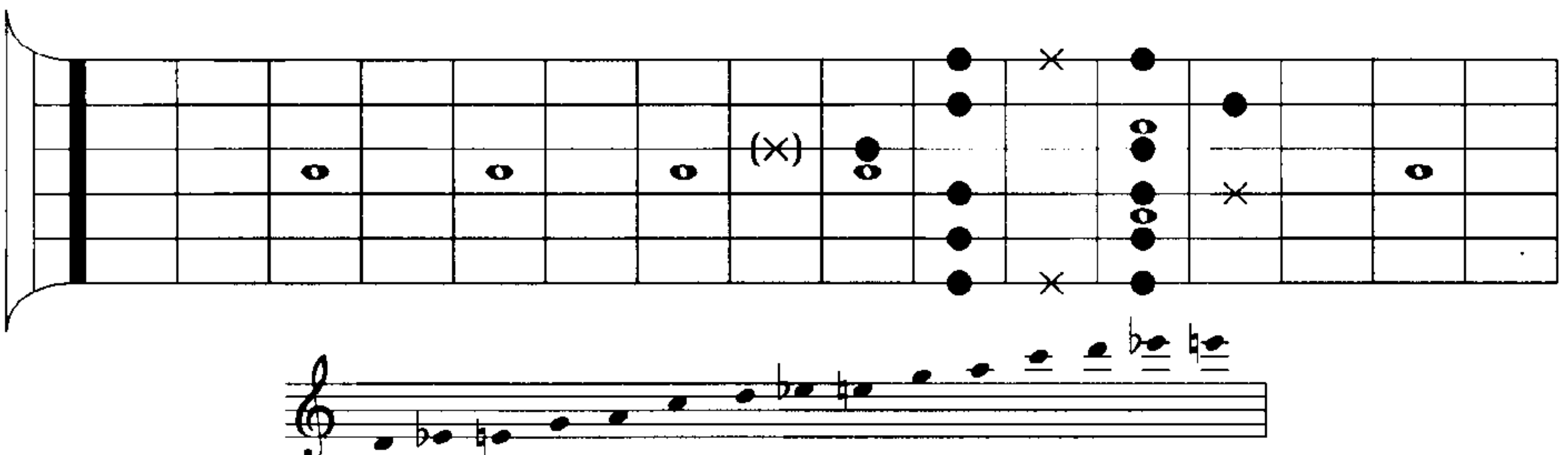
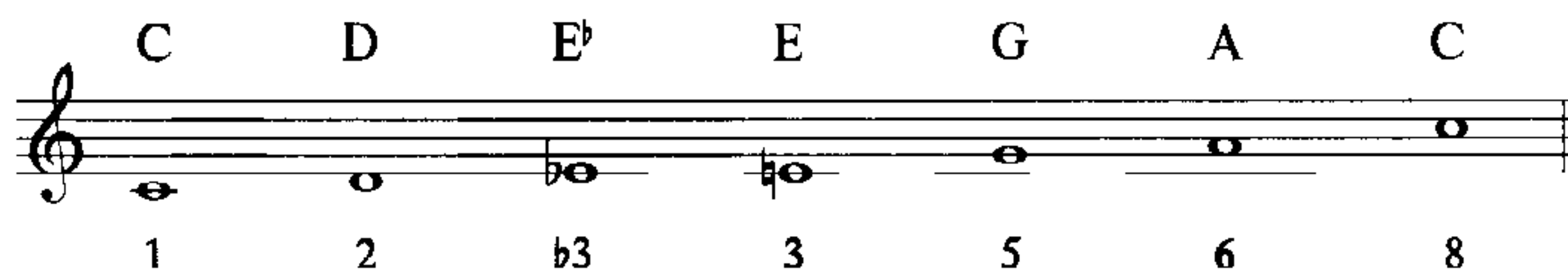


Diagram of Pattern 5 on a fretboard (6 strings, 24 frets). The pattern consists of the following frets and strings (from top to bottom): 1st fret (1st string), 2nd fret (2nd string), 3rd fret (3rd string), 4th fret (4th string), 5th fret (5th string), 6th fret (6th string), 7th fret (1st string), 8th fret (2nd string), 9th fret (3rd string), 10th fret (4th string), 11th fret (5th string), 12th fret (6th string), 13th fret (1st string), 14th fret (2nd string), 15th fret (3rd string), 16th fret (4th string), 17th fret (5th string), 18th fret (6th string), 19th fret (1st string), 20th fret (2nd string), 21st fret (3rd string), 22nd fret (4th string), 23rd fret (5th string), 24th fret (6th string). The pattern is marked with 'x' at the 1st fret (1st string), 4th fret (4th string), 7th fret (1st string), 10th fret (4th string), 13th fret (1st string), 16th fret (4th string), 19th fret (1st string), and 22nd fret (4th string). The musical notation below shows the scale in G major, starting on G4 and ending on G5, with the following notes: G4, A4, B4, C5, D5, E5, F#5, G5.



In the chapter on pentatonic scales I've already mentioned that an A minor pentatonic has the same notes as a C major pentatonic. What happens if we add an E \flat to the C major pentatonic? This scale supplies us with a major as well as a minor third:

BLUES SCALE



If you play this scale over a C major chord, you'll get a country-flavored sound a la **Albert Lee** or **Steve Morse**.

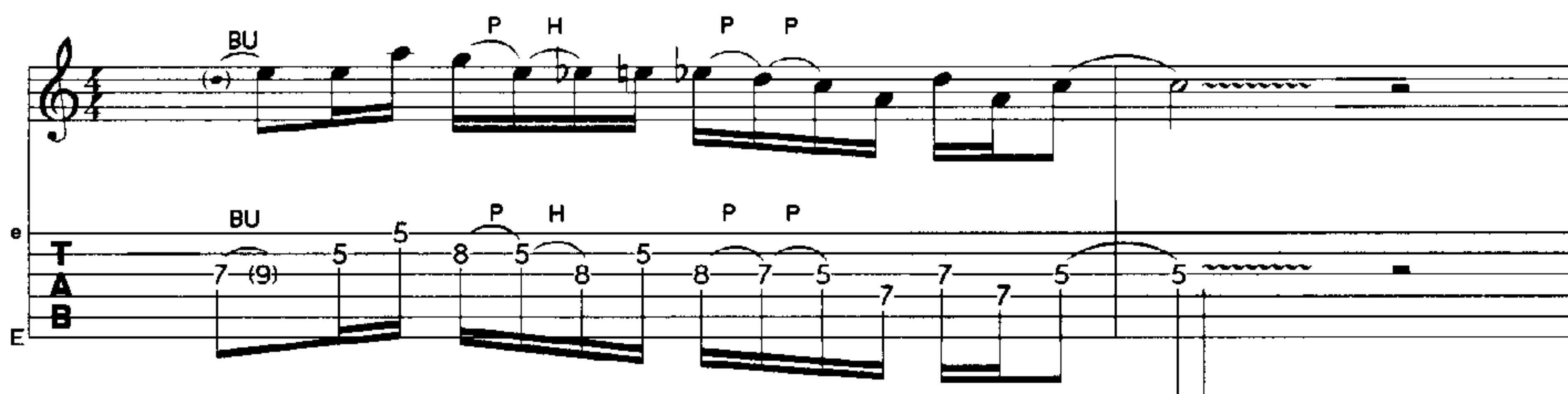
BLUES LICKS

Here are a number of licks derived from the blues scale in A. You can play them over Am 7 , A 7 and C major.

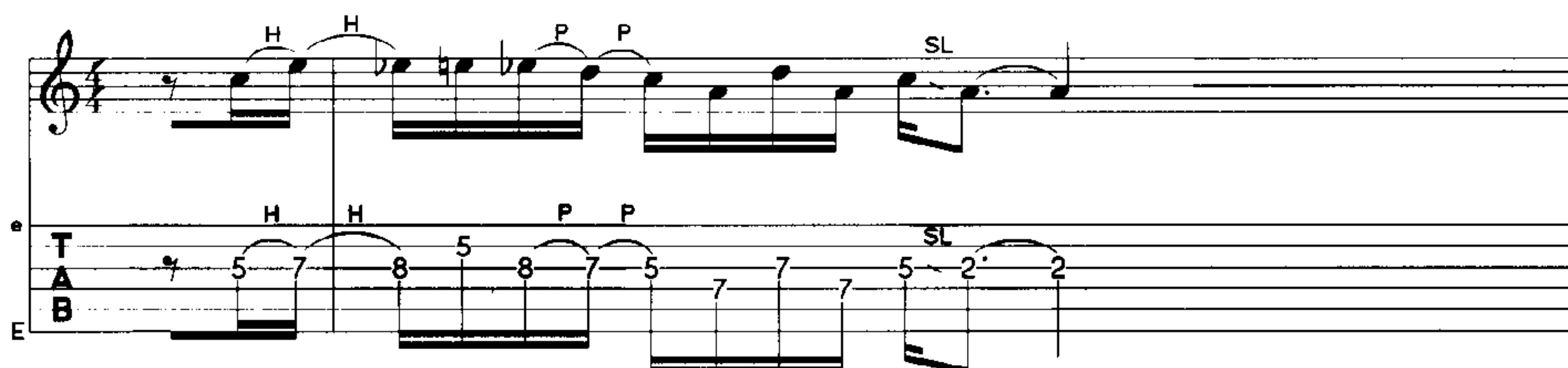
Try them as well in different styles of music like blues, rock /pop, heavy metal or jazz and you'll see how adaptable and useful this simple scale can be.

Hey: here's an inside tip!: When playing a blues scale over a dominant 7th chord (e.g. A 7), try bending the minor 3rd (e.g. C) a little, approximately a quarter tone. This quarter tone between C and C \sharp over the A 7 chord what I refer to as the "blues third". This technically "dissonant" tone is exactly what gives the blues an authentic feeling.

Lick 6



Lick 7



Lick 8



BU SL

3 3 3

BU SL

9 (12) 9 8 7 5 7 7 5 5

3 3

Lick 9



H H V V P P H H V V P

6 6

etc.

H H V V P P H H V V P

3 4 5 3 5 4 3 4 5 5 4

6 6

Lick 10



rake

3 3 3 3

5 8 8 5 8 5 8 8 5 7 8 7 5

3 3 3 3

Lick 11



SL SL P H P H

etc.

SL SL P H P H

7 8 7 5 7 5 7 5



Lick 12

6
CD INDEX

Musical notation for Lick 12, featuring a treble clef and a key signature of one flat. The notation includes a guitar staff and a tablature staff. The guitar staff shows a sequence of notes with fingerings (P, H) and a repeat sign. The tablature staff shows the corresponding fret numbers (5, 8, 5, 7, 5, 5, 8, 5, 7, 5, 7, 5) and a repeat sign. The word "etc." is written after the first sequence of notes.

Lick 13

6
CD INDEX

Musical notation for Lick 13, featuring a treble clef and a key signature of one flat. The notation includes a guitar staff and a tablature staff. The guitar staff shows a sequence of notes with fingerings (SL, P, H, SL, V) and a repeat sign. The tablature staff shows the corresponding fret numbers (4, 5, 4, 5, 7, 5, 7, 5, 7, 9, 8, 8, 10, 10) and a repeat sign.

Lick 14

6
CD INDEX

Musical notation for Lick 14, featuring a treble clef and a key signature of one flat. The notation includes a guitar staff and a tablature staff. The guitar staff shows a sequence of notes with fingerings (SL, V) and a repeat sign. The tablature staff shows the corresponding fret numbers (14, 13, 12, 15, 11, 12, 13, 14, 12, 14, 13, 12) and a repeat sign.

Lick 15

6
CD INDEX

Musical notation for Lick 15, featuring a treble clef and a key signature of one flat. The notation includes a guitar staff and a tablature staff. The guitar staff shows a sequence of notes with fingerings (BU, V, P, SL, V, P, V, Sm) and a repeat sign. The tablature staff shows the corresponding fret numbers (8, 10, 11, 8, 12, 8, 10, 8, 7, 8, 7, 5, 8, 7, 5, 7, 5, 7, 7) and a repeat sign.

Here are some more chord progressions to jam on.

Jamtrack 4



	A ⁷	(D ⁷)	A ⁷	A ⁷
a)	A-Blues scale	∕	∕	∕
b)	F [♯] -Blues scale	A-Blues scale	F [♯] -Blues/A-major pent.	∕

	D ⁷	D ⁷	A ⁷	A ⁷
a)	A-Blues scale	∕	∕	∕
b)	A-Blues scale	∕	F [♯] -Blues/A-major pent.	∕

	E ⁷	D ⁷	A ⁷	E ⁷ :
a)	A-Bluesscale	∕	∕	∕
b)	F [♯] -Blues/A-major pent.	A-Blues scale	F [♯] -Blues/A-major pent.	∕

Jamtrack 5



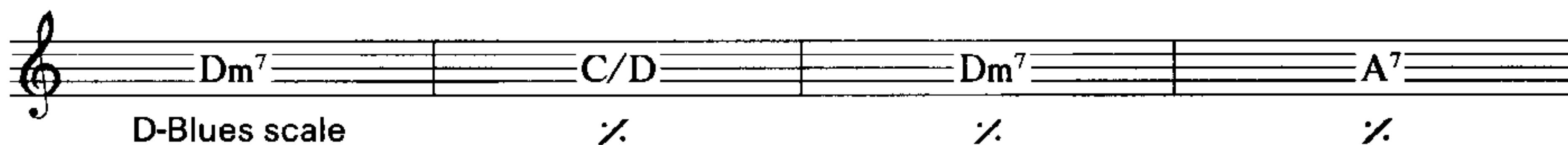
	Am ⁷	∕	∕	∕
	A-Blues scale	∕	∕	∕

	Dm ⁷	∕	Am ⁷	∕
	A-Blues scale	∕	∕	∕

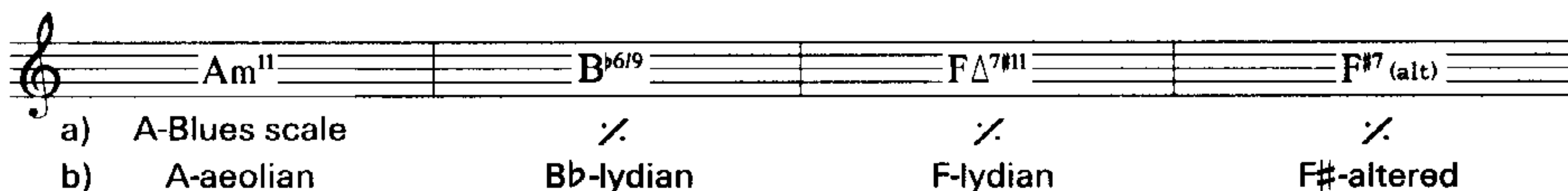
	F ⁷	E ⁷	Am ⁷	E ⁷ :
	A-Blues scale	∕	∕	∕



Jamtrack 6



Jamtrack 7

**TIP:**

More blues scale licks can be found in my book **Masters of Rock Guitar**, in the chapters on the following guitarists:

Jimi Hendrix – Lick 9 (pg. 34); **Eric Clapton** – Lick 2 (pg. 40); **Jeff Beck** – Lick 6 (pg. 49);

Jimmy Page – Lick 2 (pg. 54); **Eddie van Halen** – Lick 11 (pg. 98);

Randy Rhoads – Lick 1 (pg. 103); **Steve Lukather** – Lick 5, 8 (pg. 129, 130);

Joe Satriani – Lick 1 (pg. 134).

CHAPTER 4

STRING BENDING VIBRATO

Smear, release and unison bends

Circle, rock and jack-off vibrato



If there's one technique that's typical for electric guitar, it's **string bending** for sure. So string bending and vibrato are the first playing techniques I'd like to cover in this book.

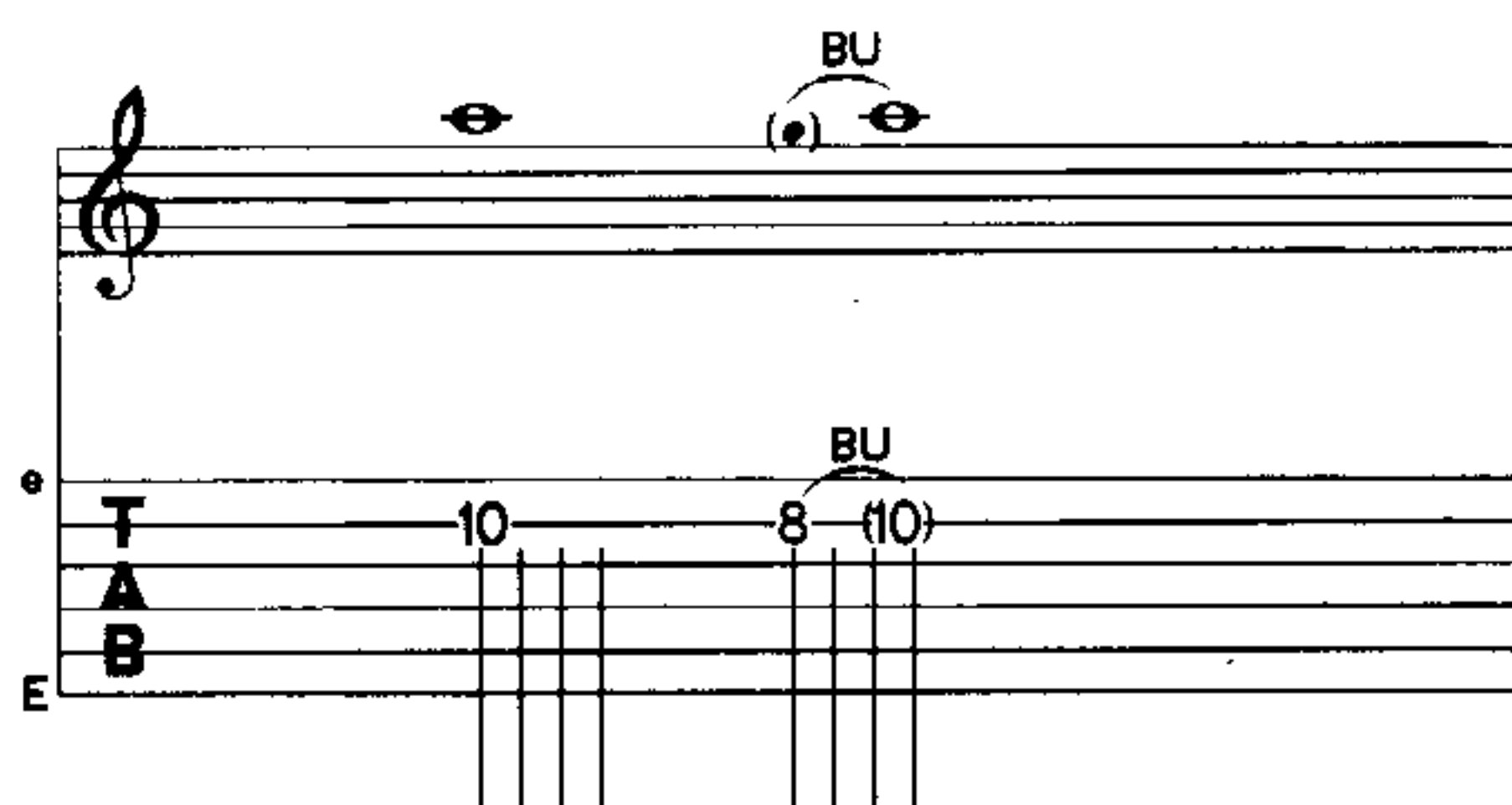
STRING BENDING

Starting notes and target notes

What's most important in string bending is to make a clean bend to the target note. Notes bent too high or not high enough sound pretty awful, to be honest. This means that you have to know which note you want to bend to (the target note).

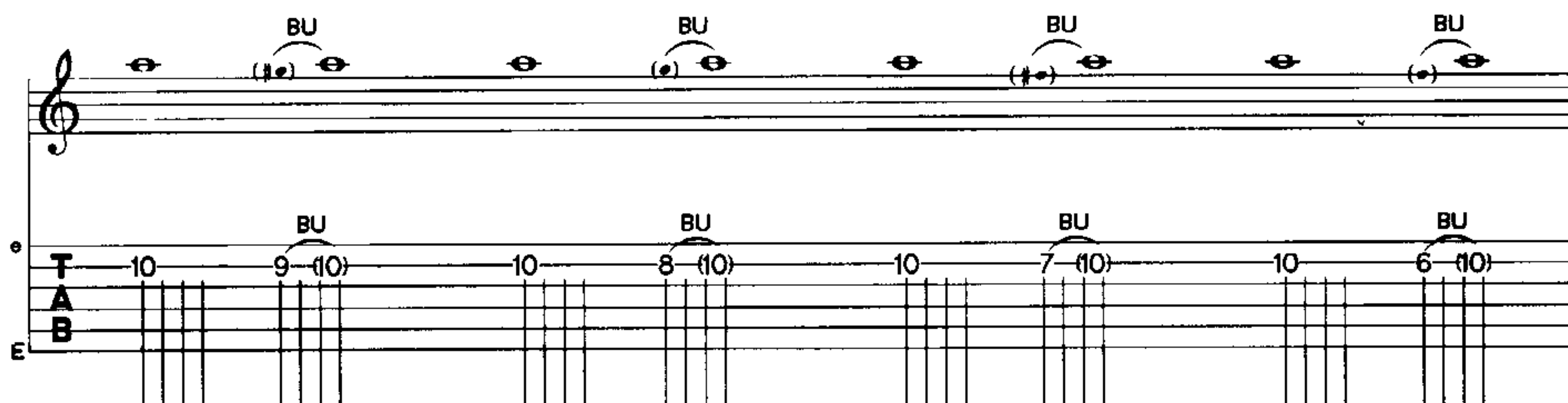
When you begin to work on your bending technique, first play the note to which you want to bend to. Then play two frets lower (starting note) and bend up to the target note. The bent note should have the same pitch as the fretted target note.

Exercise 6



Try also to reach the same target note from different starting notes (semi-tone = 1 fret lower, minor third = 3 frets lower, major third = 4 frets lower). This will bring a lot of variety into your playing, so stick with it even though it IS pretty hard. The playing of **van Halen**, **Steve Lukather**, **George Lynch** and others shows how much life their extreme string bending techniques have given to their music.

Exercise 7



I recommend that you do this exercise on all strings, with all fingers and in every position, as each string feels and sounds different in the different areas of the fingerboard. Is a difference in sound produced by bending to the same note using different fingers? I would say yes.

By the way: bending is much easier if the finger making the bend is supported by the fingers behind it (impossible, of course, when bending with the index finger). With the index finger you should, on the lower four strings, only bend in a downward direction. It also helps to save energy if you place your thumb over the top of the guitar neck, using it to counter the pressure from the bending finger. This basically turns the whole bending process into a contraction of the hand muscles.



right



wrong

One problem that often crops up with bending and vibrato is unwanted noise from the strings behind the hand. For this reason I usually position my hand like this while bending:



As my ring finger – supported by my middle finger – bends the string, my index finger mutes the other ones.

PENTATONIC BENDING

The following table shows how to effectively apply different-sized bends within the pentatonic scale.

STARTING NOTE	TARGET NOTE	EFFECT
A	1 whole step - B	extends the pentatonic scale; produced interval: 9, adds color
A	minor third - C	great intensity (Lukather)
C	1 whole step - D	standard rock bending
C	minor third - E \flat	great intensity
C	major third - E	extreme intensity
D	half step - E \flat	blue note; adds color
D	whole step - E	standard rock bending
E	whole step - F \sharp	extends the pentatonic scale; produced interval (13), adds color in blues
E	minor third - G	high intensity
G	whole step - A	standard rock bending
G	major third - B	extends the pentatonic scale; produced interval (9), adds color

SMEAR BEND (SMALL BEND)

This bend is particularly important for blues guitar playing, and is produced by lightly bending the note about a quarter tone.

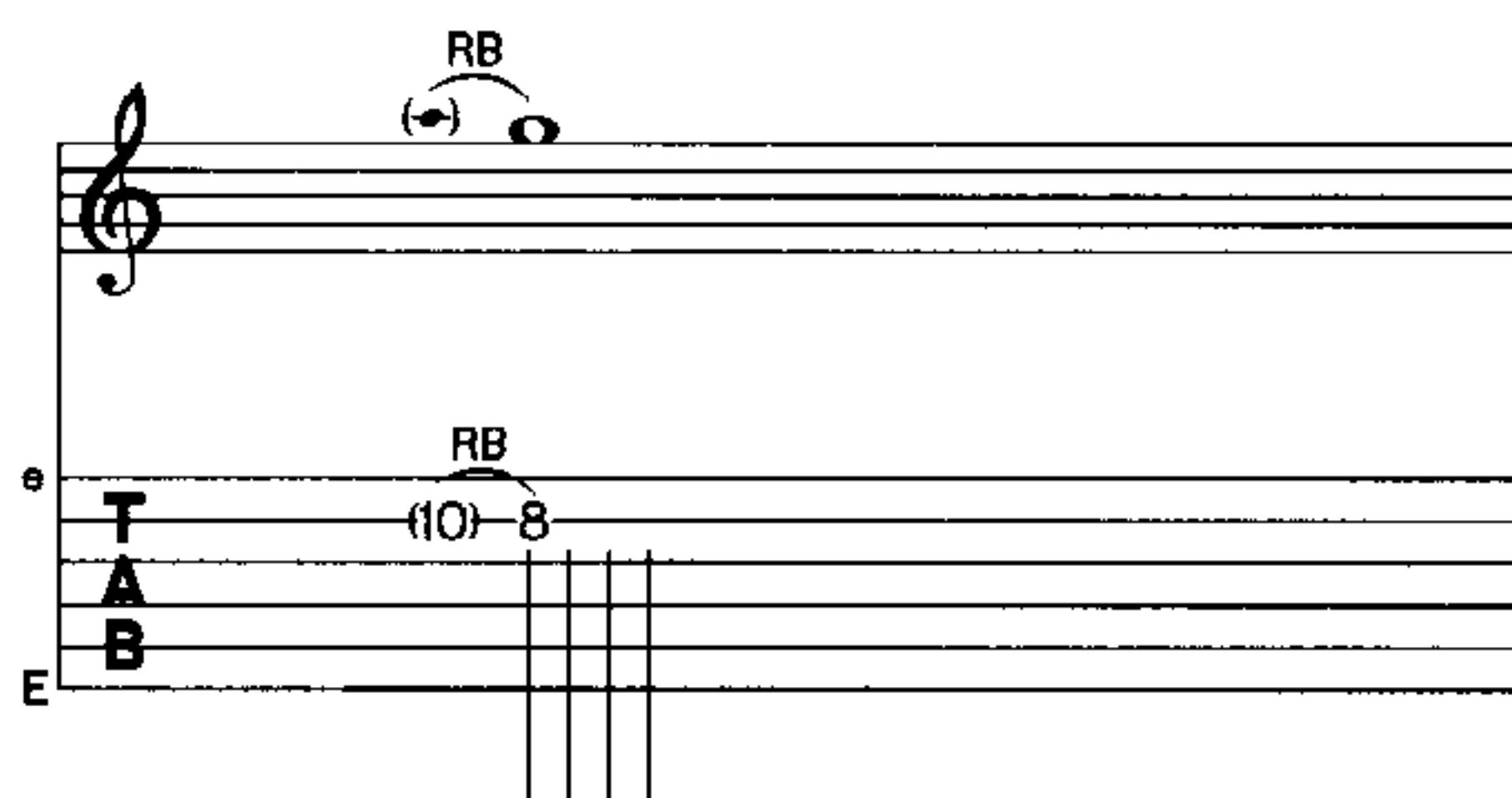
Exercise 8



RELEASE BEND

The release bend sounds as if one is bending "downwards". The trick is to bend up very quickly before the note is played and then to relax the bend letting it "fall" downwards.

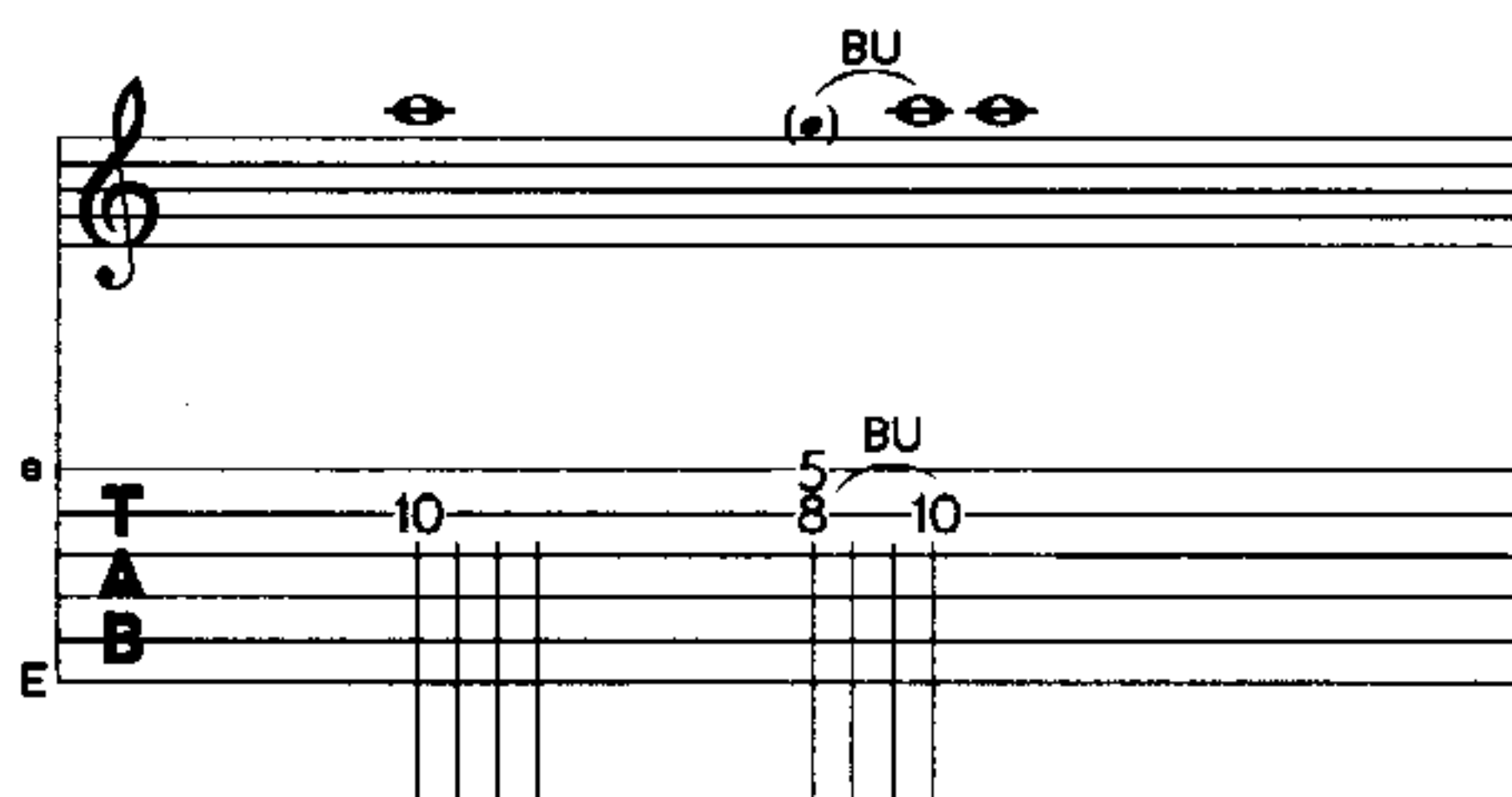
Exercise 9



UNISON BEND

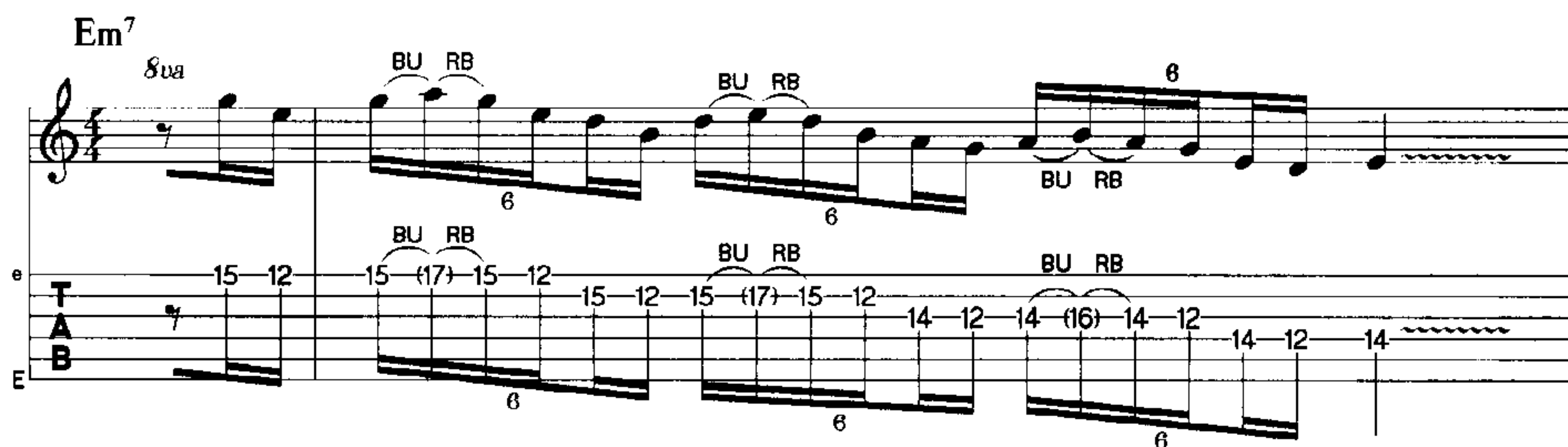
The unison bend is a technique used very often by Carlos Santana and Jimi Hendrix. Here, for example, the B and the high E string are struck simultaneously and the B string is bent until it reaches the same pitch as the note on the E string. This makes long-sustained notes sound fuller.

Exercise 10



In order to keep this from being too theoretical, here are a few licks using these techniques. Remember, these licks only help if you incorporate them directly into your playing.

Lick 16



Lick 17



D⁷

BU RB BU

8 (10) 8 (10) 8 5 8 6 (7)

T A B

E

Lick 18



Am⁷

8va BU SL BU SL BU

10 (12) 13 (15) 17 (19)

T A B

E

Lick 19



D⁷

BU BU BU

5 (7) 7 5 (7) 7 5 (7) 7 5 5

T A B

E

Lick 20



Em⁷

8va BU BU BU BU

20 (22) 15 15 15 20 (22) 15 15 15 20 (22) 15 15 15 20 (22) (22)

T A B

E

Lick 21



Em⁷

8va SL BU BU BU

TAB: 12 12 12 14 (15) 12 12 15 (16) 12 12 15 15 (17) (17)

Lick 22



Am⁷

8va 3 BU BU BU

TAB: 14 12 14 14 (17) 14 (17) 14 (17) 14 14

Lick 23



Am⁷

8va 3 BU RB RB BU BU BU

TAB: 10 13 13 (17) (16) (13) 13 13 10 13 13 (17) 13 (16) 13 (15) 13

Lick 24



Em⁷

8va BU BU 3 Sm Sm

TAB: 15 (17) 15 (16) 12 14 12 12 14 12

Lick 25

11
CD INDEX

G

8va

BU

RB

RB

BU

BU

RB

RB

BU

T

A

B

14 (16) 15 (16) 14 (16) 13 (16) 12 (16) 14 12 (16) 14 12 14

14 14 12 14 (16) 14 (16)

PROJECT:

- Practice these licks over the chord progressions from the previous chapters.

VIBRATO

Vibrato is quite similar to bending. Technically speaking, it IS the same thing; at least some of the vibrato variations use the same concepts. And there are quite a number of different kinds with different sounds. Vibrato is a very individual matter, which is why all the variations differ in speed and intensity. What you should look for as you go through the various possibilities is a certain evenness and relaxation in your movements. Nervous shaking around won't cut it.. It also sounds much better if you don't start off vibrating away like crazy. Instead, let the tone sound first, and then gradually add increasingly stronger vibrato.

1. The "Classic" Vibrato.

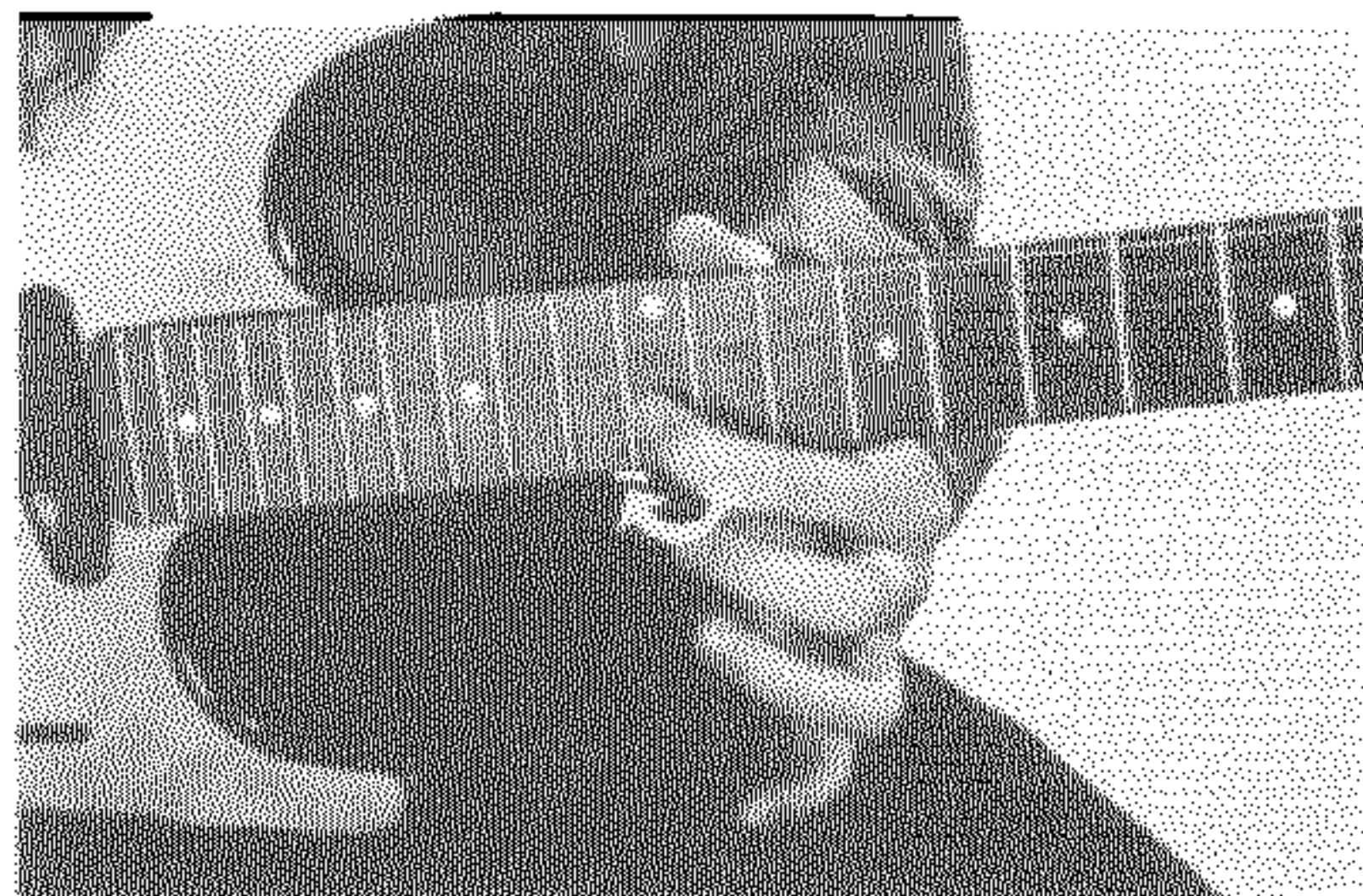
This vibrato, subtle, unobtrusive, and mostly used with nylon-stringed instruments, sounds very good on electric guitar as well. Here the hand moves lengthwise across the string while the movement comes from the elbow and the shoulder.



classic vibrato

2. The Circle Vibrato

This is another restrained vibrato; it lends itself well to ballad playing. With this kind of vibrato you draw a small circle on the neck with your finger and the string. The movement comes from the wrist. Steve Vai uses this vibrato quite frequently.



The circle vibrato as played by Steve Vai.

3. The Raunchy Rock Vibrato

This is the most frequently used vibrato in rock music. It's actually just normal string bending, the difference being that you go right back to the starting point after you bend. The movement comes solely from the wrist, not from the fingers!

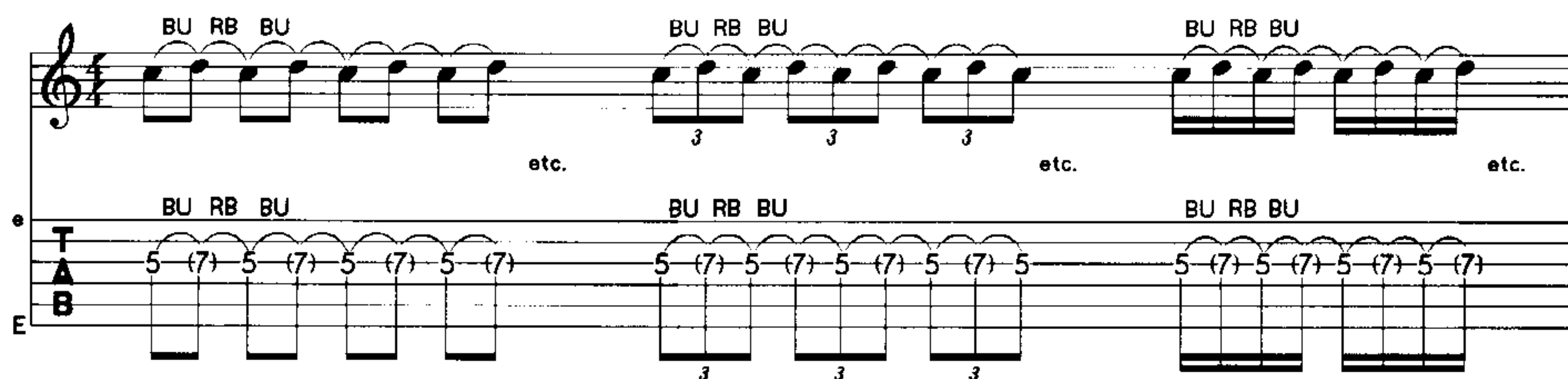
Here are a few things to watch for:

- After the bend, always come all the way back to the original tone, or the vibrato tone is going to sound really off.
- Practice your vibrato with the metronome.
If you vibrate with the beat, your vibrato notes will be much more integrated into the music than if you just swing back and fourth mechanically .

Start with quarter notes, then go on to eighth notes, then eighth note triplets and then sixteenth notes. And if you want to imitate **B.B. King**, vibrate as quickly as you can.

Exercise 11

The musical notation for Exercise 11 is presented on a grand staff with three systems. The first system shows a sequence of notes with 'BU' (bend up) and 'RB' (release bend) markings. The second system shows a sequence of notes with 'BU' and 'RB' markings, followed by a triplet of eighth notes. The third system shows a sequence of notes with 'BU' and 'RB' markings, followed by a triplet of eighth notes. The notation includes fingerings (5, 7) and a 'etc.' marking.



This vibrato, as I've already said, is the real rock vibrato. Of course there are many good examples to listen to.. For a relatively "tame" vibrato, I'd check out **Eric Clapton**, and for the ecstatic, extreme version **Zakk Wylde** (Ozzy Osbourne).

4. The George Lynch Jack-Off Vibrato

This type of vibrato is definitely not for slow ballads; try it instead on wild and crazy up-tempo tunes. I first heard this kind of vibrato from **George Lynch**, so I've named it after him for this book. Whereas with the other kinds of vibrato a bending technique is used to produce oscillations in tone, here it's actually a slide technique.

Let's assume that you want to apply vibrato to the E note on the third string, ninth fret. Simply slide back and forth between E and D (or E and F#) as quickly as you can.

The more extreme and aggressive the better.

This style of vibrato is often used by **Warren de Martini** (RATT).

5. Vibrato with the tremolo arm

When you listen to guitarists like **Jeff Beck** and **Gary Moore**, you can't fail to notice their "creamy", controlled vibrato sound. This is done with the tremolo arm. It's the only kind of vibrato where the pitch of a note can be both raised (as with the other vibrato types) and lowered. As with the other types, there are different ways of applying this technique, varying chiefly in intensity from guitarist to guitarist. This ranges from restrained (**Jeff Beck**) to moderate (**Gary Moore**) to ecstatic (**Steve Vai**). (Example in chapter 17, "The Vibrato Arm", pg. 164)

Try the different styles until you've found your own personal vibrato; nothing sounds more boring and amateurish than notes left just hanging there.

Even if you're a beginner, you should pay special attention to string bending and vibrato; cleanly played blues and pentatonic licks treated with good bends and vibrato sound extremely professional and are not really that difficult or technically demanding. Good guitar playing doesn't necessarily mean racing over the fretboard at 100 m.p.h. Simple licks are often much more effective.

TIP:

Further bending and vibrato licks can be found in my book "Masters of Rock Guitar" with the following guitarists:

J. Hendrix – Lick 2, 11 (pg. 33, 35); J. Beck – Lick 4, 5, 11 (pg. 48, 51);

M. Knopfler – Lick 6 (pg. 81); S. Morse – Lick 13, 14 (pgs. 90, 91);

E. v. Halen – Lick 10, 13 (pg. 98, 99); G. Moore – Lick 3, 11 (pg. 122, 125);

S. Lukather – Lick 2, 12 (pg. 128, 130).

Chapter 5

THE MAJOR SCALE

Positions

Licks

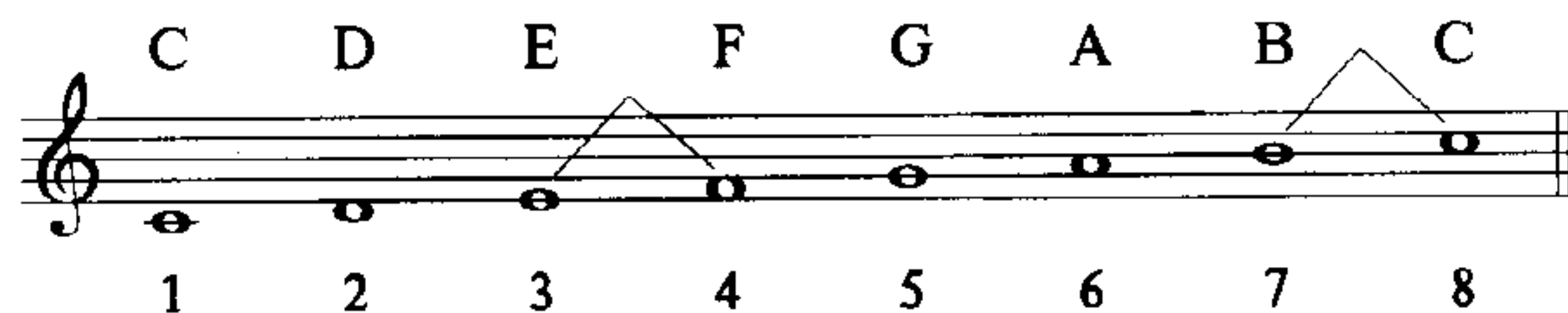
Projects

Now that you've hopefully got the pentatonic and blues scales under your fingers, it's time to turn to the most important scale in Western music: the major scale.

It is the basis of our musical culture, from classical to trash! So it's absolutely important even for the "hardcore" faction. It also forms the basis of modern harmony.

Here is the construction and intervallic formula of the major scale in C:

C Major Scale

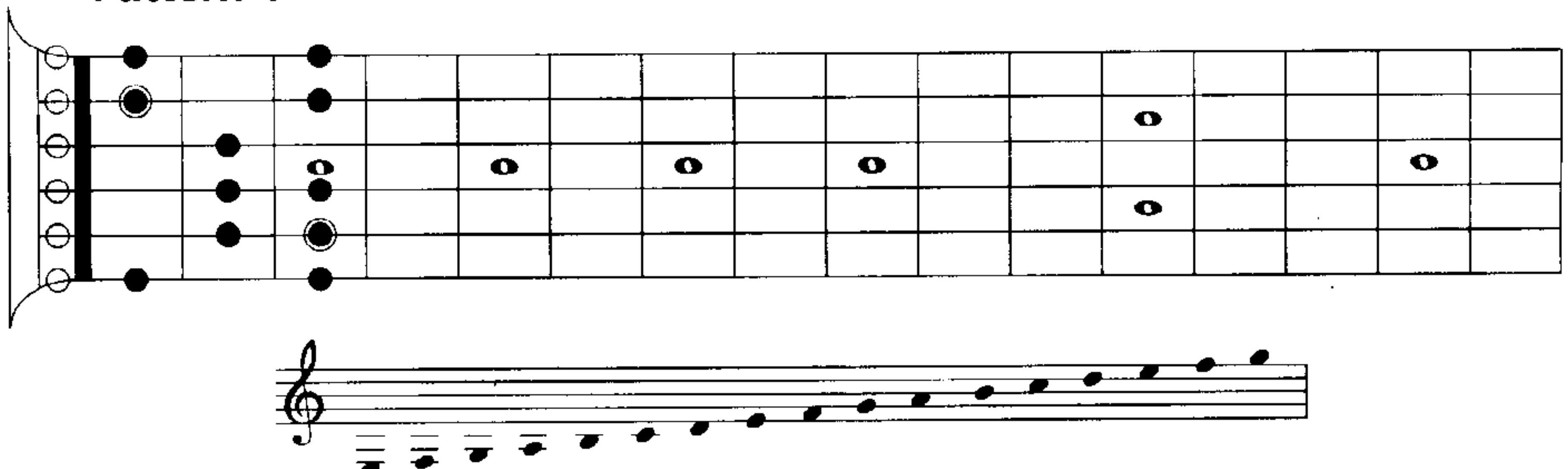


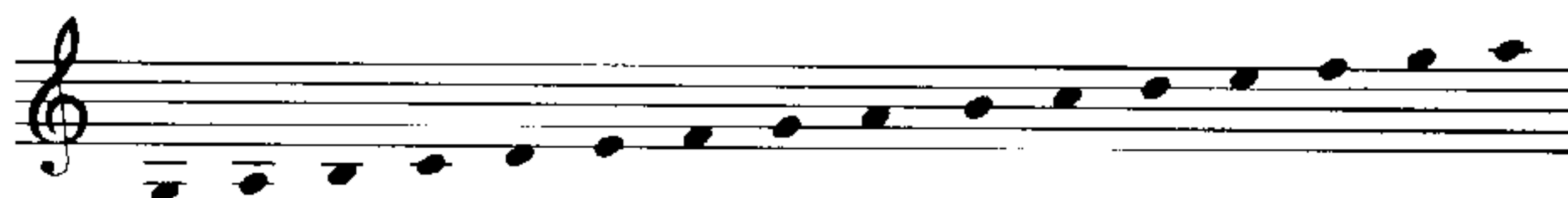
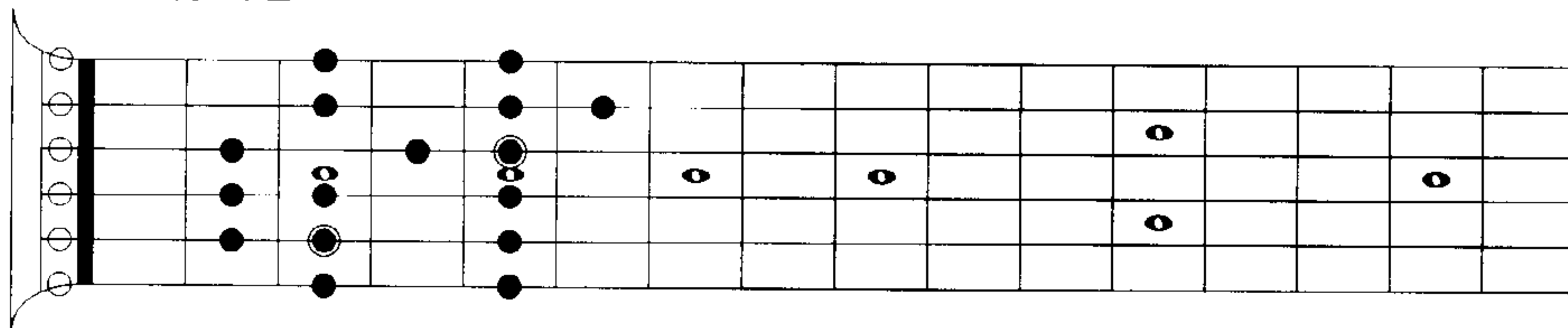
The Five Positions of the Major Scale

To get these under your fingers, it's easier to use the C major/A minor pentatonic as a starting point. Instead of learning five new scale fingerings, you need only to fill in the "missing" notes.

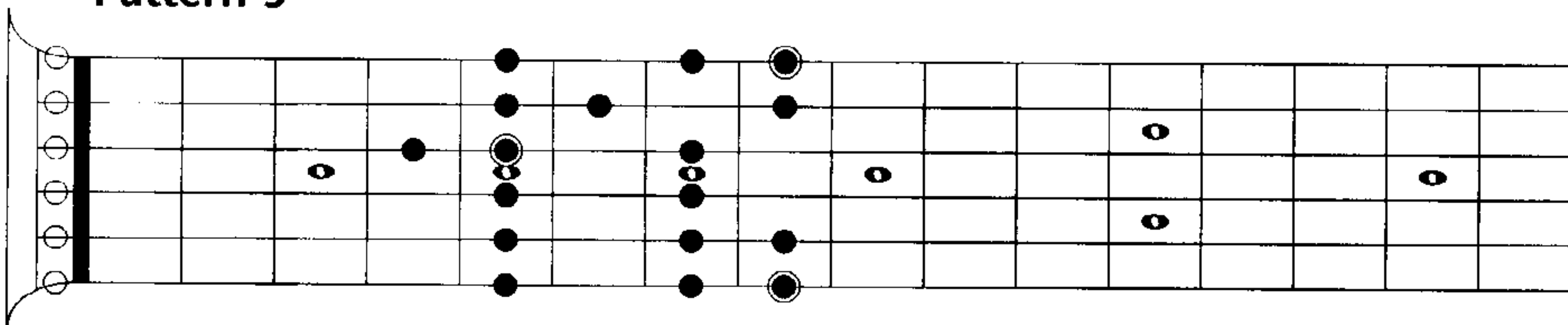
In C major these notes are F and B. If you add them to the five pentatonic fingerings, you will arrive at:

Pattern 1

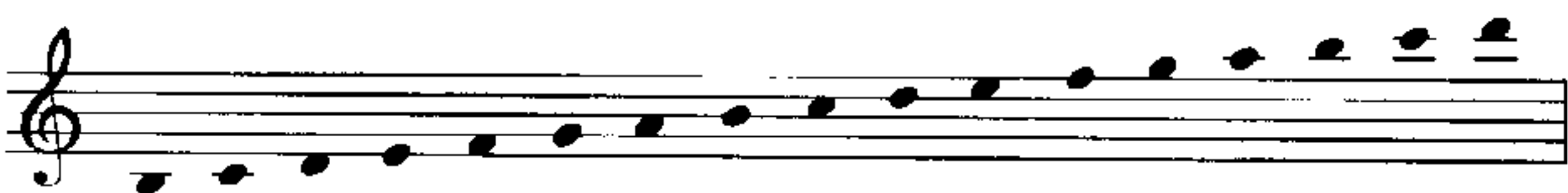
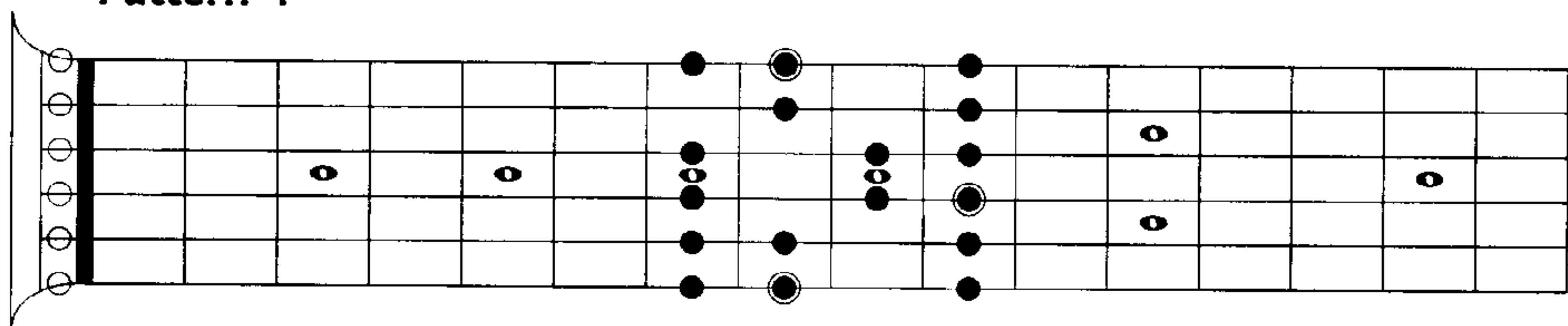




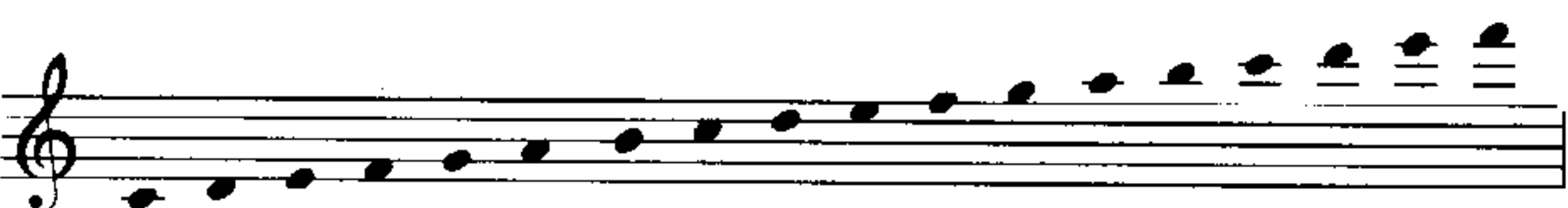
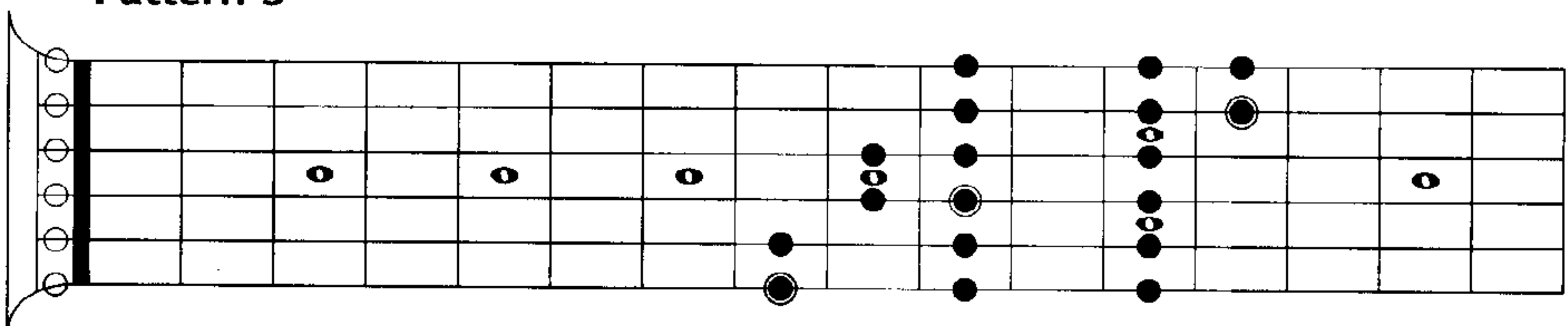
Pattern 3



Pattern 4



Pattern 5



As soon as you learn these fingerings, you can improvise all over the fingerboard in every key. As with the blues and pentatonic scales, all you have to do is shift the scale with its root note to any key you want. The major scale is more melodic than the ones we've learned so far, and not as rock-sounding.

Here are a few more licks from the major scale: They're all in C major. Play them over all the diatonic chords in that key.

C/Cmaj⁷ , Dm⁽⁷⁾ , Em⁽⁷⁾ , F/Fmaj⁷ , G/G⁷ , Am⁽⁷⁾ , B⁰/Bm^{7b5}

Lick 26

12
CD INDEX

Chord: CΔ⁷ 8va

Lick 27

12
CD INDEX

Chord: Dm⁷

Lick 28

12
CD INDEX

F Δ 7#11

SL SL SL SL SL SL H P 3

BU RB SL BU

T A B

8 10-12 10-8 10-12 10-9 10-12 10-9 10-9 12 10 12 9-10-12 10 12-13 10-12-13 12-10 13 12-10-9

BU RB SL SL BU RB

BU RB

T A B

(10) 9 10 10 8 7 (8) 7 8

Lick 29

12
CD INDEX

Dm⁷

8va P H P P H H P BU

T A B

10 13 10 12 13 12 10 13 10 12 13 10 13 12 10 12 10 12 14

Lick 30

12
CD INDEX

Am⁷

8va BU RB H P SL loco SL SL

T A B

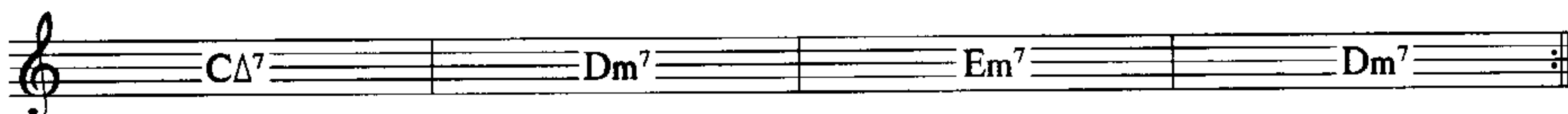
15 (17) 15 13 15 13 12 13 14 12 9 10 12 10 9 12 10 12 9 10 9 12 10 8 8 10

So, which lick sounds the best over which chord?



PROJECT:

- Learn the five major scale positions.
- Transpose them to every key.
- Try playing the scales in groups of three and groups of four (see pg.19, pentatonic scales).
- Learn the scale horizontally as well, that is, along the length of a single string.
- Try to mix melodic major scale licks with blues sounds to give your solos and improvisations more contrast.
- Use the following chord progressions.

Jamtrack 8**13**
CD INDEX

- a) C major/A minor pentatonic or A blues scale
- b) C major scale

Jamtrack 9**14**
CD INDEX

- a) C major/A minor pentatonic or A blues scale
- b) C major scale

TIP:

Additional licks using the major scale can be found in my book **Masters of Rock Guitar** with the chapters of the following guitarists:

R. Rhoads – Lick 2, 3, 4 (pg. 103, 104); **G. Moore** – Lick 3, 8 (pg. 122, 124);
J. Satriani – Lick 3, 8, 9 (pg. 135, 137); **P. Gilbert** – Lick 10 (pg. 154).

Chapter 6

ALTERNATE PICKING

Three-Note-per-String scales

Pedal-tone Licks

Mega-Chops

Paganini

A good picking technique with the right hand is the basis of lead guitar playing, but it takes some time and practice to develop it. So, at first, be prepared to devote a good portion of your practice time to getting things moving.

Alternate picking means that the string is alternately picked, steadily and evenly, from above (downstroke \square) or below (upstroke ∇).

With this technique it's important that both hands are synchronized. Build up carefully. Start slowly, and stay on the ball (or, more appropriately, on the pick), and only gradually increase the tempo.

Here are a few things to watch for:

- Hold the pick as you're accustomed to and whichever way feels natural to you, but try to pick as relaxed and evenly as possible.
- The picking motion should come from the wrist, not from the elbow or the joints of the thumb and finger.
- Practice with a drum machine or at least a metronome. Start with a setting of 72 (or 60 for triplets) and try to keep a record of your progress.
- Practice all examples in a triplet feel, as well. $\text{♩} \text{♩} \text{♩} = \text{♩}^3$
- Practice all examples with extremely muted strings.

Start with a tremelo on an open string and see how fast you can play making a note of where the metronome was. This is your maximum right-hand-picking speed. It's probably a lot higher than the speed at which you can play with both hands playing together. The difference is merely a question of synchronization.

Let's start with a few exercises on a single string. Play them on every string.

Exercise 12

ascending

asc. etc. etc. on every string!

T A B E

descending

desc. etc. etc. on every string!

These exercises are sequences similar to those used by guitarists like **Malmsteen**, **Vinnie Moore**, **Paul Gilbert** or **Tony MacAlpine**. Shift them up and down the fingerboard, as well as parallel (finger position stays the same) and also diatonic (altered to fit the scale).

Exercise 13

a) b) c) d)

The next step consists of exercises on two strings:

Exercise 14

a) b) c)

THREE-NOTES-PER-STRING SCALES

Because it makes alternate picking very simple, I myself play almost all scales with three notes per string (see major scale pattern 5, pg. 45) In order to play a long scale passage through a number of octaves, I basically divide it so I can first play each respective sequence on two strings and then go on to the next pair of strings. With three-notes-per-string scales, the picking pattern on every new pair of strings stays the same.

Here are some useful scale sequences. First play them with pattern 5 of the major scale, then with the seven modes (see pg. 60) and other three-notes-per-string scales.

Exercise 15

Exercise 15 consists of seven scale sequences, each with a musical staff, a picking pattern, and a fretboard diagram. The sequences are:

- a) groups of 4 I**: Musical staff shows a sequence of eighth notes. Picking pattern: □ V □ V □ V □ V □ V □ V. Fretboard diagram shows frets 8, 10, 12 on the B string and 8, 10, 12 on the E string.
- b) groups of 4 II**: Musical staff shows a sequence of eighth notes. Picking pattern: □ V □ V □ V □ V □ V □ V. Fretboard diagram shows frets 12, 8, 10, 12 on the B string and 8, 10, 12, 8, 10, 12 on the E string.
- c) seconds**: Musical staff shows a sequence of eighth notes. Picking pattern: □ V □ V □ V □ V. Fretboard diagram shows frets 10, 8, 12, 10, 8, 12 on the B string and 8, 12, 10, 8, 12, 10 on the E string.
- d) thirds**: Musical staff shows a sequence of eighth notes. Picking pattern: □ V □ V □ V □ V. Fretboard diagram shows frets 8, 12, 10, 8, 12, 10 on the B string and 8, 12, 10, 8, 12, 10 on the E string.
- e) sixths**: Musical staff shows a sequence of eighth notes. Picking pattern: □ V □ V □ V □ V. Fretboard diagram shows frets 8, 12, 10, 9, 12, 10 on the B string and 8, 10, 12, 9, 12, 10 on the E string.
- f)**: Musical staff shows a sequence of eighth notes with triplets. Picking pattern: □ V □ V □ V □ V □ V □ V. Fretboard diagram shows frets 8, 10, 12 on the B string and 8, 10, 12 on the E string.
- g) Paul Gilbert's trademark sequence**: Musical staff shows a sequence of eighth notes with triplets. Picking pattern: □ V □ V □ V □ V □ V □ V. Fretboard diagram shows frets 8, 10, 12 on the B string and 8, 10, 12 on the E string.

Of course you can play these sequences descending, too. Do it!

OK. That's enough on licks and sequences. The following musical example is taken from "Moto Perpetuo" by Niccolò Paganini. It sounds great and is incidentally a good picking exercise. Have fun!

Exercise 16*Moto Perpetuo**Niccolò Paganini*

The musical score for "Moto Perpetuo" by Niccolò Paganini is presented in four systems. Each system consists of a standard musical staff with a treble clef and a key signature of one sharp (F#), and a corresponding guitar tablature staff below it. The tablature staff is labeled with 'T' for treble, 'A' for alto, and 'B' for bass, with the string names 'E', 'A', and 'B' at the bottom. The notation includes various musical symbols such as notes, rests, and accidentals, as well as fret numbers (9, 10, 11, 12) indicating finger positions on the strings. The piece is characterized by its rapid, repetitive eighth-note patterns, which are a hallmark of Paganini's style.

First system of musical notation. The treble clef staff shows a melodic line with eighth and sixteenth notes. The TAB staff below it provides fret numbers for the strings: 12-10-9, 12-11-9, 12-10-9, 12-10-9, 9-12-12-10, 9-12-10-12, 9-10-12-10, 9-10-12, 9-10-12, 9-10-12, 10-12.

Second system of musical notation. The treble clef staff continues the melodic line. The TAB staff provides fret numbers: 10-12-11-12, 10-12-10-9, 12-10-9-10, 12-10-9-12, 10-9-8-9, 10-9-12-10, 9-12-11-12, 9-12-10-9.

Third system of musical notation. The treble clef staff continues the melodic line. The TAB staff provides fret numbers: 10-10-12-9, 10-12-9-10, 12-10-9-10, 12-10-12-13, 10-12-13-12, 10-13-12-10-10, 12-11-12, 12-10-12-10.

Fourth system of musical notation. The treble clef staff continues the melodic line. The TAB staff provides fret numbers: 9-10-12-9, 9-10-12-9, 10-12-13, 10-12-13-12, 10-13-12-10-10, 12-11-12, 12-10-12-10.

Fifth system of musical notation. The treble clef staff continues the melodic line, ending with a double bar line. The TAB staff provides fret numbers: 9-12-10-9, 10-12-13-12, 13-12-10, 10-13-12-10, 9.

MEGA-CHOPS

An excellent exercise, which covers several areas at the same time, is what I call **Mega Chops**. This is actually an exercise which has become a standard one for other instruments such as saxophone or violin: playing uninterrupted sixteenth notes, if possible all over the instrument.

Note!: This is nothing more than an exercise for improving your playing technique. It has absolutely nothing to do with phrasing or improvisation. Therefore you should find an appropriate place for it in your practice plan (see chapter 18, pg. 169) As a purely technical exercise, however, it can (almost) work wonders. As the non-stop playing of sixteenth notes is not so easy to accomplish overnight, you'll have to work up to it by means of another exercise: the rhythm pyramid.

THE RHYTHM PYRAMID

STEP 1:

Choose a chord progression (including scales, etc.) and record about five minutes of it on tape.

STEP 2:

Now play through all the rhythms in the pyramid. Start with a few minutes of just whole notes, then go on to half-notes, quarter-notes, quarter-note triplets, etc on to sixteenth-note triplets. This is a sure way of learning the different rhythms and how to build them into your solos in a controlled manner.

STEP 3:

Take easy chord progressions and try to gradually apply more sophisticated solo concepts to them (pentatonics, major scales, sequences, arpeggios, intervals, chromatic passing tones, etc.) and listen closely to the varying effects you get.

STEP 4:

Now mix the different rhythms and add hammer-ons (see pg. 72) and other playing techniques.

It's important in steps 1 - 3 to play uninterrupted melody lines without stopping. So as not to get bored while playing the slow notes, I'd recommend that you apply as many phrasing variations as possible: various vibratos (see pg. 40), bendings (see pg. 34), slides etc.

Once again, this exercise is purely technical in nature and has very little to do with interesting improvisation.

PROJECT:

- Play examples of all of the previous jam tracks and chord progressions in a **mega chops** style.

THE RHYTHM PYRAMID

count: 1 2 3 4

Whole note

count: 1 2 3 4

Half note

count: 1 2 3 4

Quarter note

count: 1 + 2 + 3 + 4 +

Quarter note triplet

count: 1 + 2 + 3 + 4 +

Eight note

count: 1 e + 2 e + 3 e + 4 e +

Eight note triplet

count: 1 e + e 2 e + e 3 e + e 4 e + e

Sixteenth note

count: u - ni - ver - si - ty u - ni - ver - si - ty u - ni - ver - si - ty u - ni - ver - si - ty

Sixteenth note quintuplet

count: 1 e + e + e 2 e + e + e 3 e + e + e 4 e + e + e

Sixteenth note triplet

Chapter 7

THE MODES OF THE MAJOR SCALE

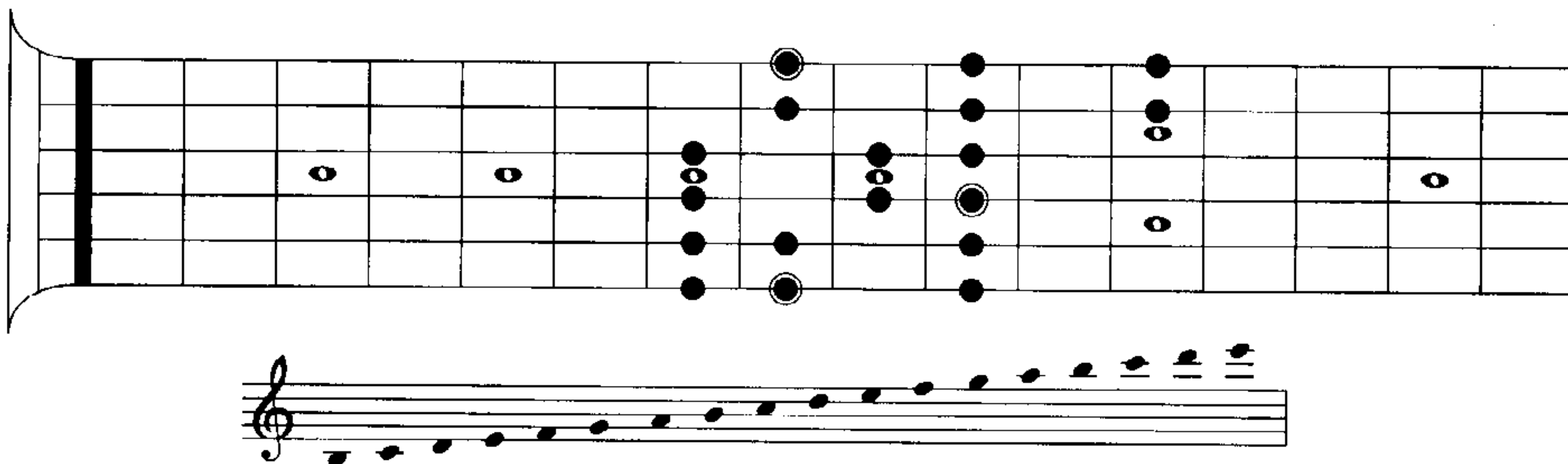
Three-Notes-per-String Scales

Modes

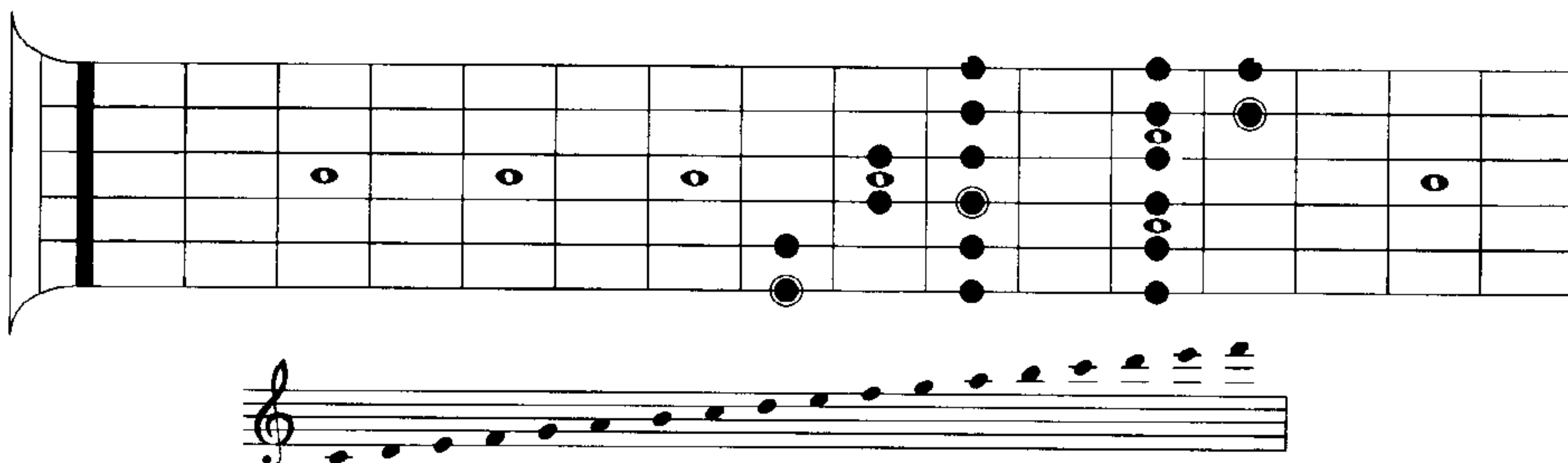
Tonal Colors

Pitch Axis System

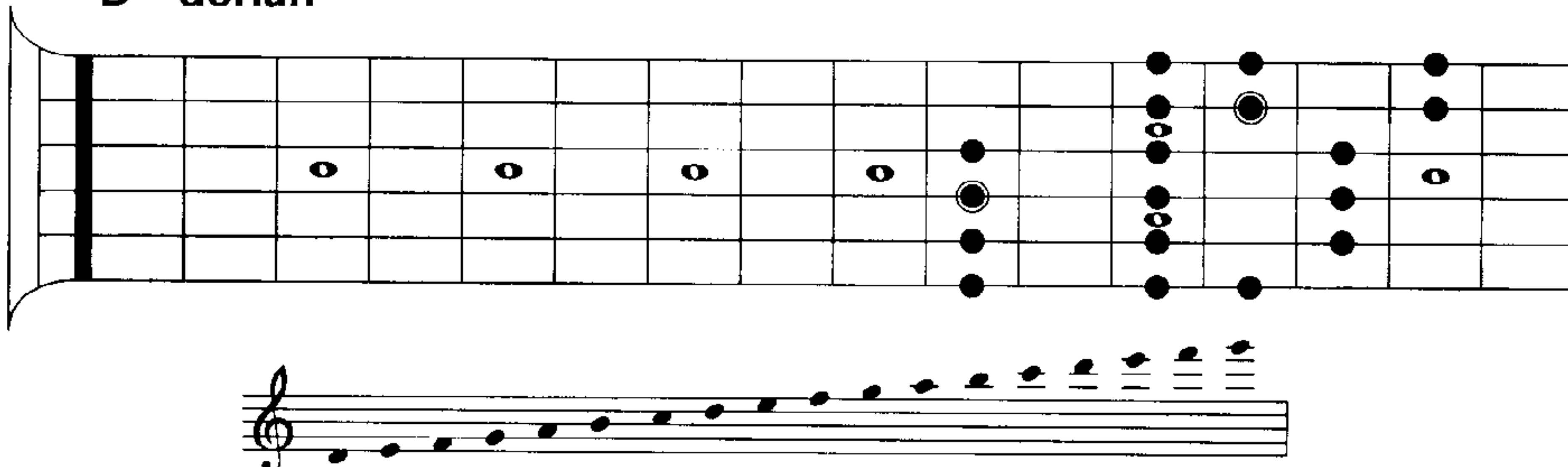
B - locrian



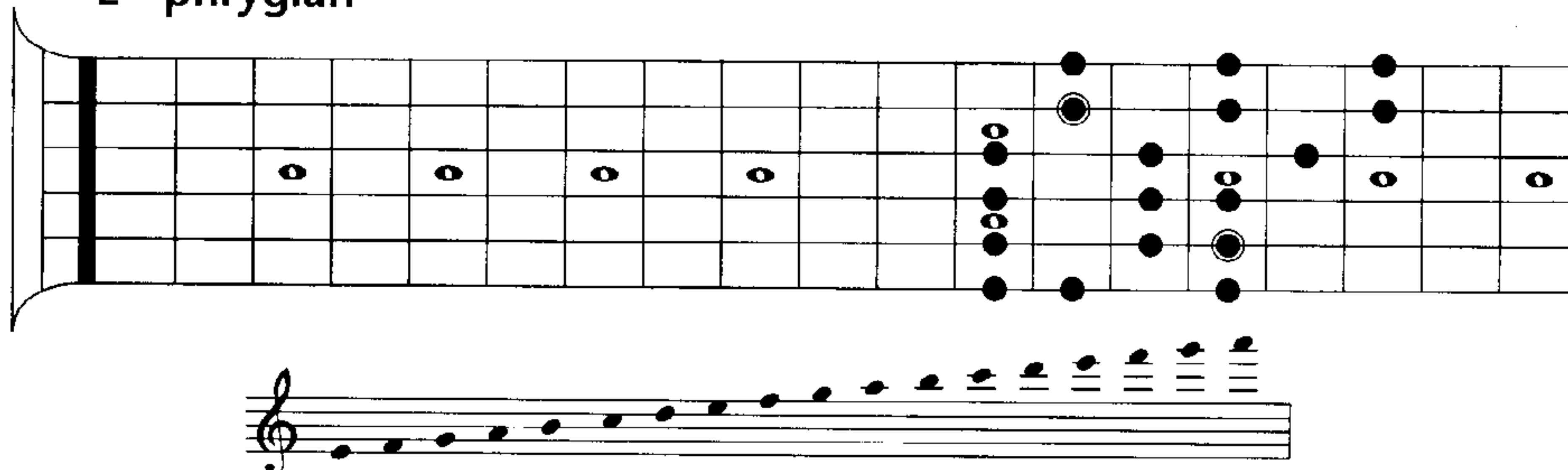
C - ionian



D - dorian



E - phrygian



As you can see, I've added the name of the respective modes to the fingering positions.

The modal system works like this:

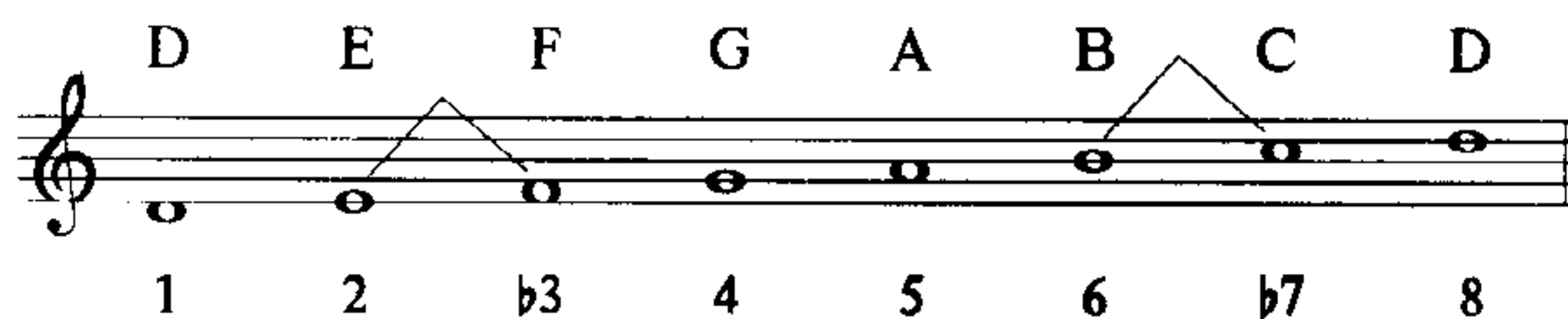
One can differentiate between scales either by comparing the intervallic combinations or the sequence of whole and half steps within the scale.

For example, the major scale (or ionian mode) in C:



As you can see, the half steps occur between steps 3 and 4, and 7 and 8. This is true of all major scales, regardless of what the tonic note is!

If we start the C major scale from D instead of C things look a bit different:



The positions of the half steps have changed (2/3 and 6/7) as well as the naming of the intervals. This scale is the dorian scale.

If you start the C major scale from the remaining notes (E - F - G - A - B) the result will be the five other modes: E phrygian, F lydian, G mixolydian, A aeolian and B locrian.

Each mode has a different structure.

PROJECT:

- Write all the modes in the same manner and note how they're constructed.

DRILL:

-In order to get the new scale positions down, here's a short scale drill:
let's have a drill party, dude!

Play up and down

- | | |
|--------------------------|-----------------------|
| a) G-lydian | d) F \sharp -ionian |
| b) B \flat -mixolydian | e) B-aeolian |
| c) A-dorian | f) A \flat -locrian |

In thirds

- | | |
|----------------------|-----------------|
| a) E \flat -ionian | d) C-locrian |
| b) A-phrygian | e) G-dorian |
| c) B \flat -lydian | f) C-mixolydian |

In seconds

- | | |
|----------------------|-----------------|
| a) B-aeolian | d) A-mixolydian |
| b) B \flat -ionian | e) G-phrygian |
| c) F-lydian | f) D-dorian |

In groups of four

- | | |
|-----------------|------------------------|
| a) G-dorian | d) G \sharp -lydian |
| b) E-phrygian | e) F \sharp -locrian |
| c) D-mixolydian | f) B-mixolydian |

PROJECT:

Guitarists like **Steve Vai**, **Joe Satriani** and **Pat Metheny** often play melody lines, licks and sequences on a single string, that is they view the fingerboard horizontally, lengthwise, instead of dividing it into scale positions (the vertical view). This keeps you from getting stuck in a rut with scale positions. So try also playing the modes on one string. As you practice, experiment with various phrasing devices like slides or bending.

So what happens when all seven modes are built up from a single tonic note? The key changes!

C-ionian	:	D	E	F	G	A	B	C = C-major
C-dorian	:	D	E \flat	F	G	A	B \flat	C = B \flat -major
C-phrygian	:	D \flat	E \flat	F	G	A \flat	B \flat	C = A \flat -major
C-lydian	:	D	E	F \sharp	G	A	B	C = G-major
C-mixolydian	:	D	E	F	G	A	B \flat	F = C-major
C-aeolian	:	D	E \flat	F	G	A \flat	B \flat	C = E \flat -major
C-locrian	:	D \flat	E \flat	F	G \flat	A \flat	B \flat	C = B \flat -major

DRILL:

What are the names of the original major scales of the following modes?

- | | |
|-----------------|------------------------|
| a) C-dorian | f) F \sharp -locrian |
| b) F-ionian | g) G-aeolian |
| c) G-lydian | h) B-mixolydian |
| d) E-phrygian | i) B \flat -dorian |
| e) A-mixolydian | j) C-lydian |

Name the seven modes of these major scales.

- | | |
|---------------------|----------------------|
| a) G-major | e) F-major |
| b) A \flat -major | f) C-major |
| c) E-major | g) B \flat -major |
| d) D-major | h) F \sharp -major |

Answers on pg. 70!

The main purpose of all this is to learn how to use the seven new patterns to play in one key all over the fingerboard, or to be able to improvise in seven different keys in one fingerboard position.

But that's just one side of the modal coin.

The other use to which you can put modes is more of a compositional, or emotional nature.

At the beginning of the Baroque era (17th century) it was still common to compose in all the modes. In order to counteract the strong similarity of the modes, it was decided at some point to concentrate on the two most dissimilar sounding ones. The ionian became the major scale and the aeolian became of course the minor. The difference between these two tone "colors" can be recognized by practically anyone. Hardly used for several centuries, the modes and their different tonal colorations are now finding use in rock, jazz and pop music.

THE TONAL COLORS OF THE DIFFERENT MODES

Now we're going to get a handle on the different sounds that characterize each mode. In order to do this, it's important first to play and hear chord progressions for each one, so that later you'll be able to recognize the moods and colors of the different modes without having to analyze them.

This probably sounds very difficult, if not downright impossible. But my personal experience has been that music is often better learned and assimilated intuitively than on an intellectual level

MODAL CHORD PROGRESSIONS

Mode 1 - The Ionian (Major) Mode

As you may already know, a major scale contains both "strong" and "weak" chords. The strong chords are the ones based on the first, fourth and fifth steps of the scale:

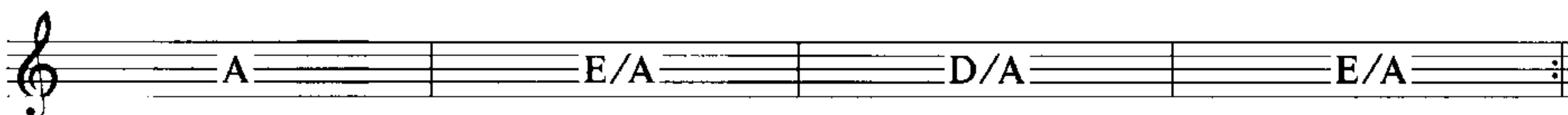
In C major, therefore, C major, F major and G major are the strong chords. D minor, E minor, A minor and B diminished are the weak ones.

To make a chord progression in the ionian mode, simply take the three strong chords and arrange them in any order.

To make use of the convenient open A - string, the following examples are all in A.

Jamtrack 10

16
CD-INDEX



The chord symbols, by the way, are called slash chords. This means that the chord is played over a non-chord-tone bass note. (Here an E major with an A in the bass).

In addition to these progressions you can, of course, simply play the ionian mode over the diatonic chord built on the first note of the major scale.

Mode 2 - The Dorian Mode

A-dorian is the second mode of G major scale. The strong chords in G major are G major (1), C major (4) and D major (5). Unfortunately, if you play these chords one after the other, they sound like G major instead of A dorian. This is not the case if you play an A bass note under these chords.

Jamtrack 11



This is yet another typical chord progression in A dorian, which is frequently heard in the music of **Santana**, for example, who plays almost exclusively in the dorian mode.

Jamtrack 12



In order to avoid having to memorize seven new finger positions for A dorian, I recommend that you use the scale from which it's derived – the G major scale – for improvising. This way you only have to learn the seven fingering positions for the major scale once, and then shift them around into whichever key you need.

Of course you can also use the dorian scale for jamming over the chord built on the second step of the scale (II m 7th).

Mode 3 - The Phrygian Mode

Using the same approach as with the first two modes we can construct a phrygian "vamp" (chord progression):

A phrygian = 3rd mode of F major: 1 = F major, 4 = B \flat major, 5 = C major.

Jamtrack 13



If you play this scale over its diatonic chord (m⁷), you'll immediately notice that although it's the same chord as in the dorian mode (m⁷), it has a totally different feeling.



Mode 4 The Lydian Mode

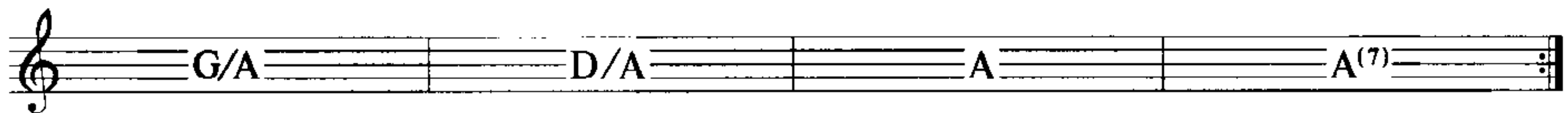
A lydian = 4th mode of E major: 1 = E major, 4 = A major, 5 = B major.

Jamtrack 14**20**
CD INDEX

The diatonic chord here is a major or a major 7th chord. Compared to the major scale, the lydian mode sounds somewhat mysterious because of the presence of the $\sharp 11$ interval (in C lydian the $F\sharp$ as opposed to F in C major). This may be the reason why **Steve Vai** frequently uses this mode.

Mode 5 The Mixolydian Mode

A mixo = 5th mode of D major: 1 = D major, 4 = G major, 5 = A major

Jamtrack 15**21**
CD INDEX

In contrast to the major and minor chords, the dominant seventh chord built on the fifth degree of the scale can (at this point anyway) only be assigned to one scale: the mixolydian scale.

As most rock music is, due to its origins in the blues, built on dominant seventh chords, the mixo scale is all but omnipresent.

Here's a tip! To bring out the blues flavor even more, an extra chromatic passing tone is often used: the minor third. The resulting scale is the basis for a lot of **Steve Morse's** solos.

PROJECT:

- Instead of the pentatonic (chapter 3, pg. 31, 32) play the respective mixolydian scales over the blues form.

Mode 6 The Aeolian (natural minor) Mode

A aeolian = 6th mode of C major: 1 = C major, 4 = F major, 5 = G major

Jamtrack 16
22
CD-INDEX


Beside the dorian and phrygian scales, the two "special" minor scales, there is of course the "normal" minor scale with its sad, melancholic sound. It's used primarily in heavy metal and in ballads.

Mode 7 The Locrian Mode

A locrian = 7th mode of B \flat major: 1 = B \flat major, 4 = E \flat major, 5 = F major

Jamtrack 17
23
CD-INDEX


This scale is perfect for the m 7b5 chord, which is built on the seventh degree of the scale. Otherwise, the locrian mode is not used for composing in "normal" rock music. But then, what's normal?

So much for modal chord progressions.

Notice the tonal and emotional colors that you get when you play these progressions. Try also to make connections between tonal colors and real colors or perhaps emotional or physical reactions (joy, hate, sadness, thirst, lust), anyway it hits you ... let your imagination loose here. What works with children and colors (green as grass, blue as the sky) also works with music. Maybe it sounds a bit crazy, but we're here to have fun, aren't we?

Here's a brief synopsis of the modes:

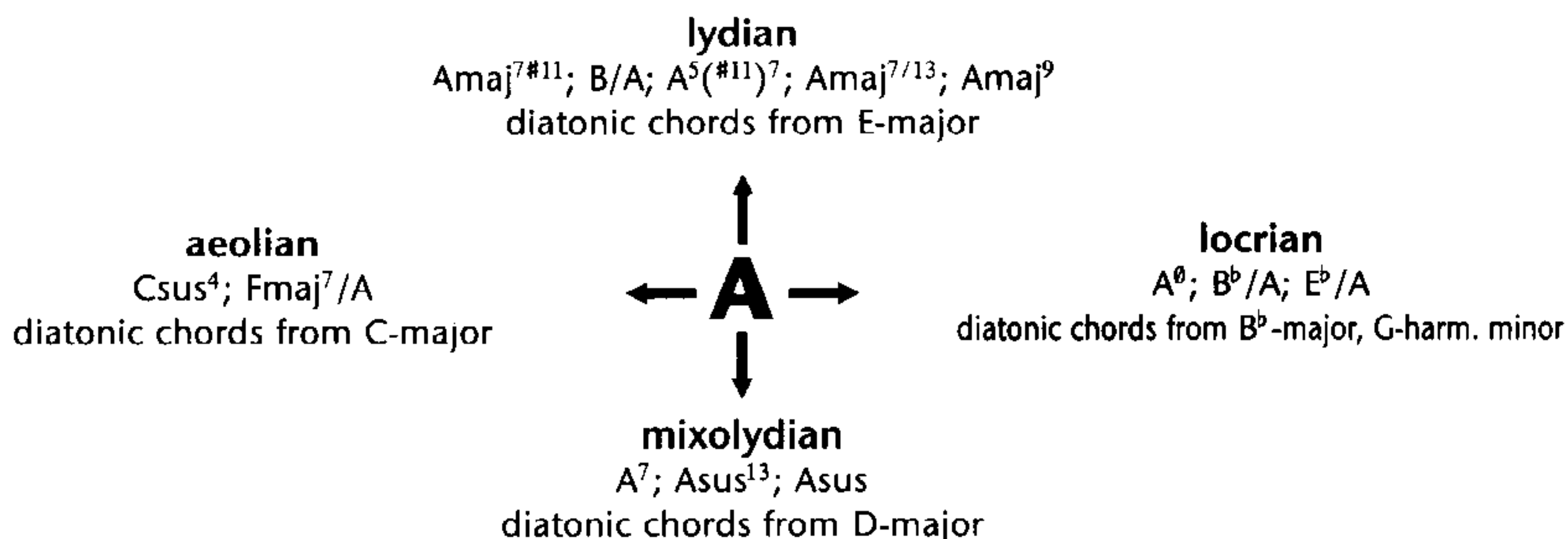
Once again, all examples in A:

- Ionian mode:** A B C \sharp D E F \sharp G \sharp , bright, cheerful sound chord:
A major, A maj⁷
- Dorian mode:** A B C D E F \sharp G, ballsy, funky sound chord:
Am⁷, most important note: major 6th (F \sharp)
- Phrygian mode:** A B \flat C D E F G, sounds a bit Spanish, the mysterious minor chord:
Am⁷, most important note: B \flat
- Lydian mode:** A B C \sharp D \sharp E F \sharp G \sharp , ethereal, mystical sound, the mysterious major chord:
A maj⁷(\sharp 11), most important note: D \sharp
- Mixolydian mode** A B C \sharp D E F \sharp G, bluesy sound chord:
A⁷, most important notes G and C \sharp
- Aeolian mode:** A B C D E F G, dark, sad sound, the sad minor chord:
Am⁷, most important note: F
- Locrian mode:** A B \flat C D E \flat F G, very tense sound chord:
Am^{7 \flat 5}

Here I'd like to mention my book "Masters of Rock Guitar", in which I've analyzed the musical sources, playing techniques, sounds, etc. of twenty leading guitarists. Besides theoretical and biographical information, the book contains over 250 licks in the styles of these pioneering rock guitarists.

THE PITCH AXIS SYSTEM

Another interesting application of the modal scales is the pitch axis concept which Joe Satriani very frequently uses. This concept can easily be explained by means of the diagram below: Satriani's method is to choose a tonal center and then pick out chords from the different modal areas, stringing them together into a unified sounding progression.



Here is an example of a chord progression constructed with this system:

A^{5#11}	A^{7sus4}	F^{maj7}/A	A^{7sus4}
(A-lydian)	(A-mixolydian)	(A-aeolian)	(A-mixolydian)

This type of chord progression is ideal for practicing the modes, as all the scales deriving from a particular tonal center vary by only a few notes.

Here's another example which clearly illustrates the different ways of looking at a chord progression.

Jamtrack 18 **24**
CD-INDEX

F/G	G¹³	Em⁷	D/E
------------	-----------------------	-----------------------	------------

modal view:	G-mixolydian	∕	E-dorian	∕
key centers :	C-major	∕	D-major	∕
pitch-axis :	G-mixolydian	∕	G-lydian	∕

Here's another example:

Jamtrack 19 **25**
CD-INDEX

Bm⁷	A/B	C/B^b	F/B^b
-----------------------	------------	------------------------	------------------------

modal view:	B-aeolian	∕	B ^b -lydian	∕
key centers :	D-major	∕	F-major	∕
pitch-axis :	D-ionian	∕	D-aeolian	∕

D/E	A/E	A/G	D/G
------------	------------	------------	------------

modal view:	E-dorian	∕	G-lydian	∕
key centers :	D-major	∕	D-major	∕
pitch-axis :	D-ionian	∕	D-ionian	∕

PROJECT:

- Apply the mega chops approach to all modal chord progressions.

Answers to page 63:

- | | | | |
|--------|----|-----|----|
| 1. a) | Bb | f) | G |
| b) | F | g) | Bb |
| c) | D | h) | E |
| d) | C | i) | Ab |
| e) | D | j) | G |

	ionian	dorian	phrygian	lydian	mixolydian	aeolian	locrian
2. a)	G	A	B	C	D	E	F#
b)	Ab	Bb	C	Db	Eb	F	G
c)	E	F#	G#	A	B	C#	D#
d)	D	E	F#	G	A	B	C#
e)	F	G	A	Bb	C	D	E
f)	C	D	E	F	G	A	B
g)	Bb	C	D	Eb	F	G	A
h)	F#	G#	A#	B	C#	D#	E#



Chapter 8

LEGATO TECHNIQUE

Hammer-on

Pull-off

Sliding

Shapes

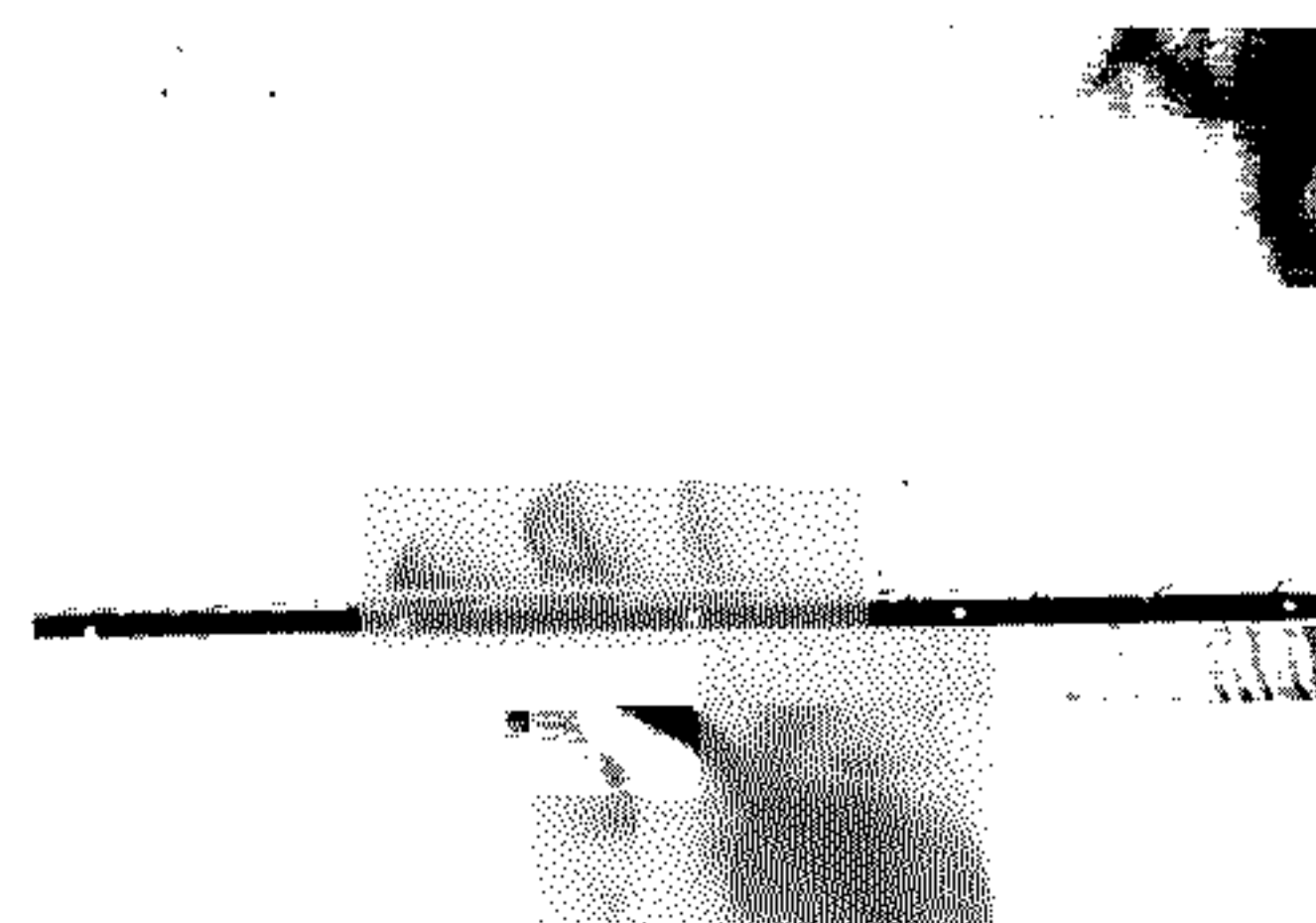
The alternative to the hard, defined sound of alternate picking technique is the legato technique, with which one plays as little as possible with the right hand.

Just about anything that can be played with a pick can also be played without it. All notes can be played either by hammering on (H), pulling off (P) or sliding (S) with the left hand. This makes the sound softer and more fluid.

The main problem with legato playing is lack of strength in the left hand. At the same time, it's very important to play as relaxed as possible, with practically no effort at all. Applying too much force often leads to tendonitis, which can be unpleasant and can take a long time to heal.

HAMMER-ON AND PULL-OFF

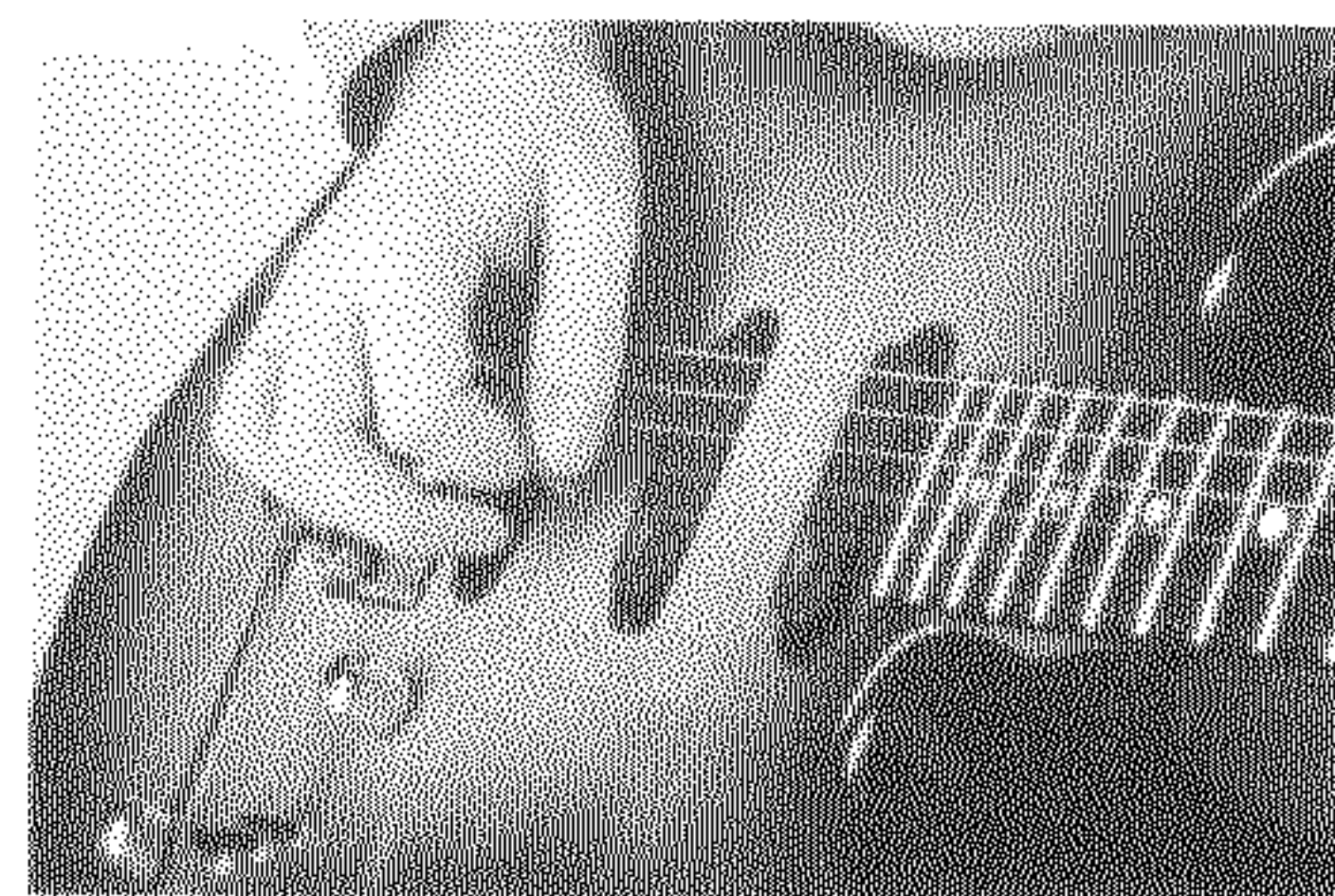
Important for a good legato technique is proper positioning of the left hand and a somewhat unusual positioning of the pick. With the fretting hand it's best to employ the classical hand position, with the thumb resting on the middle of the neck.



Thumb on the middle of the neck

To minimize the picking attack as much as possible, I'd recommend holding the pick at a 90 degree angle to the strings and, rather than using the point, playing with the side of the pick instead.

Beside a lot of patience and practice, it helps to have low action and high frets. So take a deep breath and ... hammer away!



90 degree angle of the pick

Here are a few easy exercises for hammering on (H) and pulling off (P). As we did with alternate picking we'll begin here with exercises on a single string.

Exercise 17

Exercise 17 consists of three measures of music on a single string. Each measure contains a sequence of notes connected by slurs, with 'P' (pulling off) and 'H' (hammering on) markings above the notes. The first measure shows a sequence of notes on the 8th, 5th, 8th, 5th, 8th, 5th, and 8th frets. The second measure shows a sequence of notes on the 7th, 5th, 7th, 5th, 7th, 5th, and 7th frets. The third measure shows a sequence of notes on the 6th, 5th, 6th, 5th, 6th, 5th, and 6th frets. The notation is repeated three times, with 'etc.' indicating further repetition. A note 'play on every string!' is written above the third measure. The guitar tablature below the staff shows the fret numbers for each note: 8 5 8 5 8 5 8 5, 7 5 7 5 7 5 7 5, and 6 5 6 5 6 5 6 5.

Exercise 18

Exercise 18 consists of two measures of music on a single string. Each measure contains a sequence of notes connected by slurs, with 'P' (pulling off) and 'H' (hammering on) markings above the notes. The first measure shows a sequence of notes on the 8th, 5th, 7th, 5th, 6th, 5th, 7th, and 5th frets. The second measure shows a sequence of notes on the 8th, 5th, 7th, 5th, 6th, 5th, 7th, and 5th frets. The notation is repeated three times, with 'etc.' indicating further repetition. A note 'play on every string!' is written to the right of the second measure. The guitar tablature below the staff shows the fret numbers for each note: 8 5 7 5 6 5 7 5 and 8 5 7 5 6 5 7 5.

Exercise 19

Exercise 19 consists of two measures of music on a single string. Each measure contains a sequence of notes connected by slurs, with 'H' (hammering on) and 'P' (pulling off) markings above the notes. The first measure shows a sequence of notes on the 5th, 6th, 7th, 8th, 7th, 6th, 5th, 6th, and 7th frets. The second measure shows a sequence of notes on the 5th, 6th, 7th, 8th, 7th, 6th, 5th, 6th, and 7th frets. The notation is repeated three times, with 'etc.' indicating further repetition. A note 'play on every string!' is written to the right of the second measure. The guitar tablature below the staff shows the fret numbers for each note: 5 6 7 8 7 6 5 6 7 and 5 6 7 8 7 6 5 6 7.

In the following exercise it's particularly important to pick only one note when you're ascending; the rest is played with the left hand.

Exercise 20

Exercise 20 is a single-string scale exercise. The notation shows a treble clef staff with a key signature of one sharp (F#). The scale is played on a single string, with fingerings indicated by numbers 5, 6, 7, 8, 7, 6, 5, 8, 7, 6, 5, 6, 7, 8, 5, 6, 7. Picking directions are indicated by 'P' (pick) and 'H' (hammer-on). The exercise is divided into three measures, each containing a sequence of notes. The first measure starts with a pick (P) on the 5th fret, followed by hammer-ons (H) on the 6th, 7th, and 8th frets. The second measure starts with a pick (P) on the 8th fret, followed by hammer-ons (H) on the 7th, 6th, and 5th frets. The third measure starts with a pick (P) on the 5th fret, followed by hammer-ons (H) on the 6th, 7th, and 8th frets. The exercise ends with 'etc.'.

As with alternate picking, the **three-notes-per-string** scales are excellent for legato playing.

Here are some sequences for long legato lines a la **Joe Satriani** and **Ritchie Kotzen**. Here too: first play on a single string, then on two and then on all strings over the entire fingerboard. Your goal should be to try to play without using a single picked note.

Exercise 21

Exercise 21 consists of two variations, a) and b), each showing a sequence of three notes per string. Variation a) shows a scale on a single string, with fingerings indicated by numbers 8, 5, 7, 8, 7, 5. Picking directions are indicated by 'P' (pick) and 'H' (hammer-on). Variation b) shows a scale on a single string, with fingerings indicated by numbers 8, 5, 7, 8, 7, 5, 8, 5, 7, 8, 7, 5. Picking directions are indicated by 'P' (pick) and 'H' (hammer-on). The exercise is divided into two measures, each containing a sequence of notes. The first measure starts with a pick (P) on the 8th fret, followed by hammer-ons (H) on the 5th and 7th frets. The second measure starts with a pick (P) on the 5th fret, followed by hammer-ons (H) on the 8th and 7th frets. The exercise ends with 'etc.'.

Lick 33

26
CD-INDEX

F#m⁷

H P H H P P simile

6 6 6 6

5 9 5 7 9 7 5 9 5 7 9 7 5 9 6 7 9 7 6 9 6 7 9 7 6

6 6 6 6

6 simile

P H H P P SL

6 simile

P H H P P SL

6 6 6 6

Move these sequences horizontally as well as vertically over the fingerboard without using notes that lie outside the scale.

Here are some sequences on two strings:

Exercise 22

H H P P H

8

a) H H P P H etc.

5 7 8 7 5 8

6

b) H H P H P H P etc.

5 7 8 5 7 5 8 7

P P H P P H H

P P H H H

c) P P H P P H H etc.

8 7 5 8 7 5 7 8 5 8 7 5 7 8 5 7

As the sequences above are primarily compatible with descending progressions, here are a few sequences for cool ascending ones.

Exercise 23

a) etc. b) c)

Although these licks are pretty difficult, try only picking while changing strings

Lick 34



F#m7 simile

The following lick combines hammer-ons, pull-offs and slides.

Lick 35



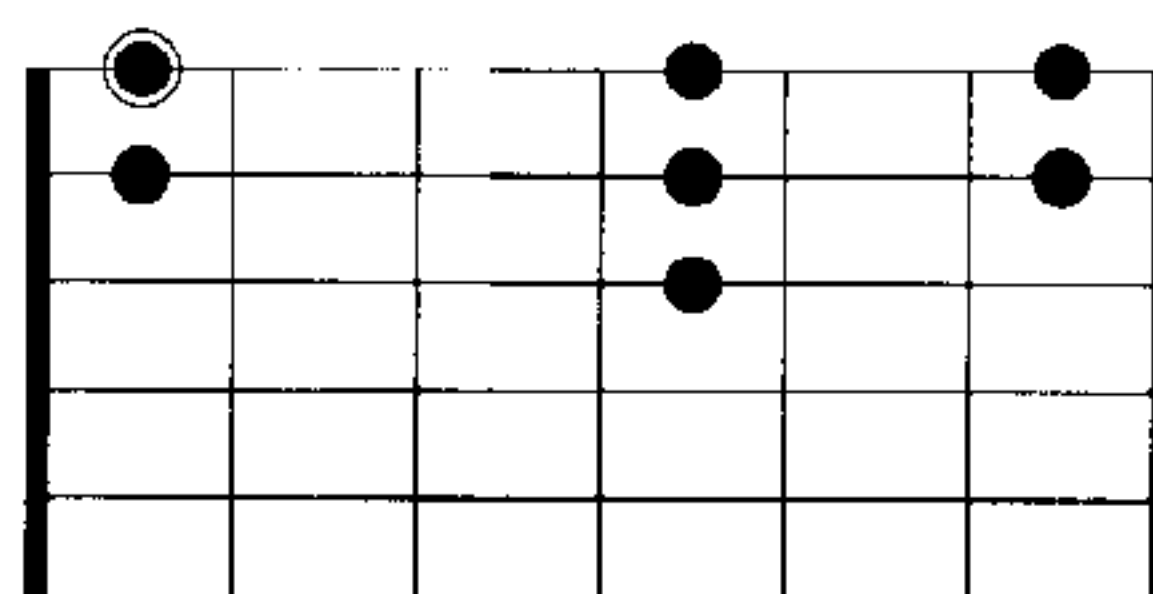
C#7#11 8va loco simile

SHAPES

The following licks use three strings and are more in a Paul Gilbert style. Try them with different **shapes** (finger positions).

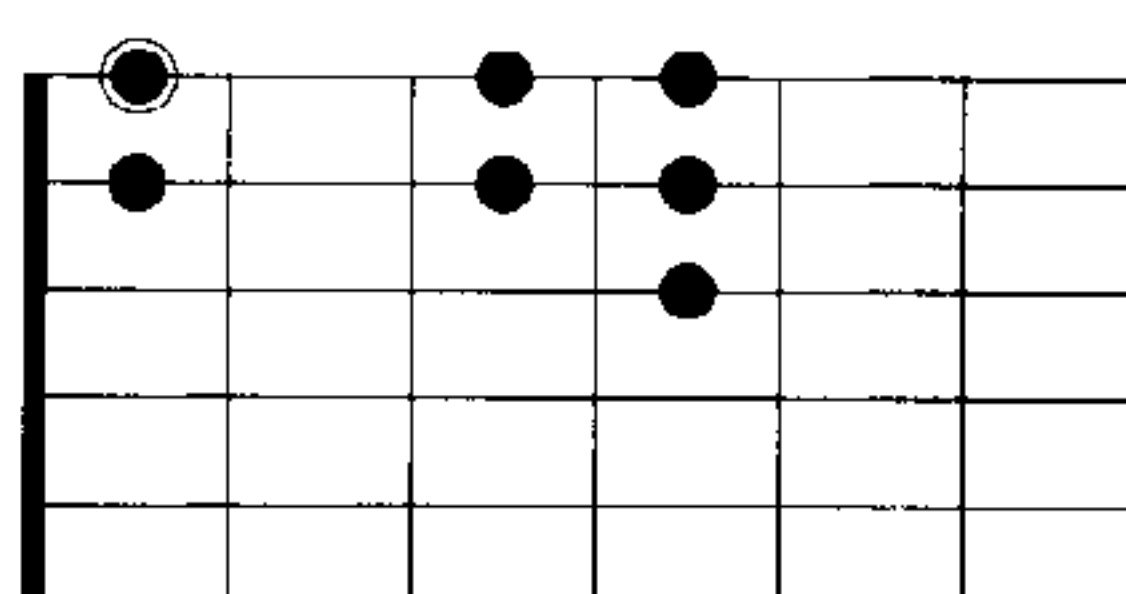
Exercise 24

A - blues



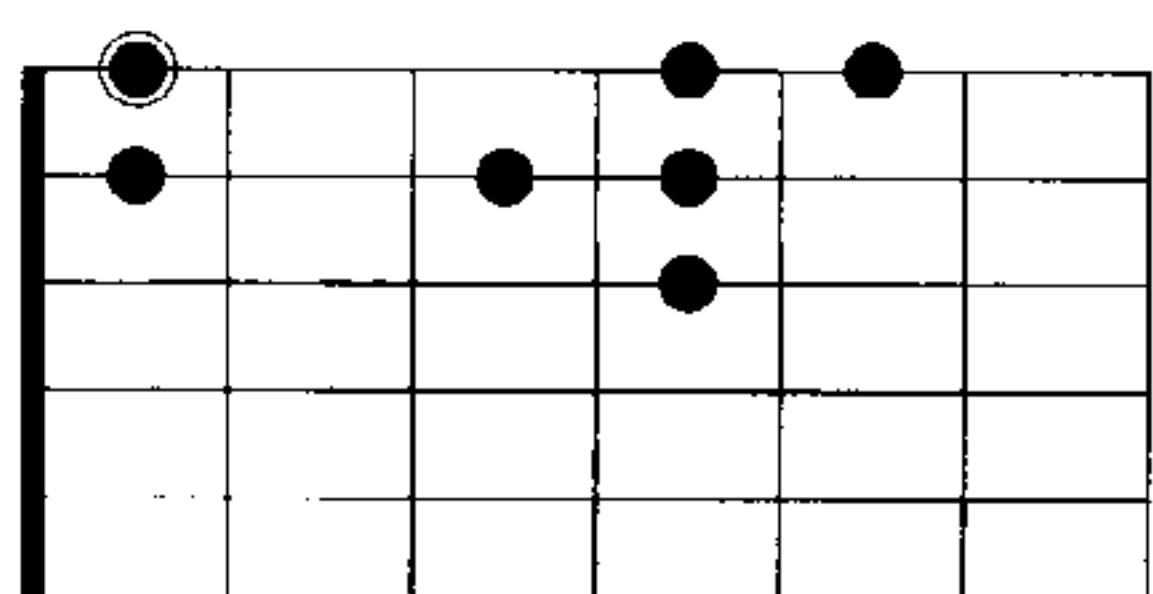
V.

A - dorian



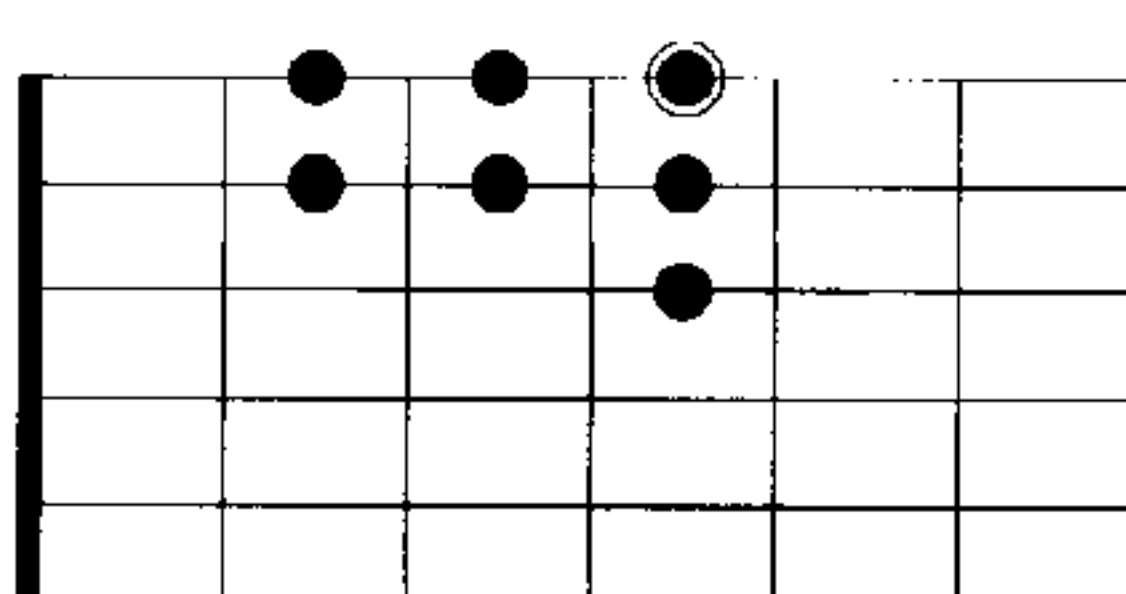
V.

A - mixo



V.

A - blues



III.

Instead of the usual licks we're now going to look at some **three-notes-per-string** shapes which I often use and which are excellent for legato playing. They offer alternative ways of using familiar material such as the blues scale, in a more modern way. Important here is that these finger positions are composed of two-string shapes, which can be transferred to other pairs of strings.

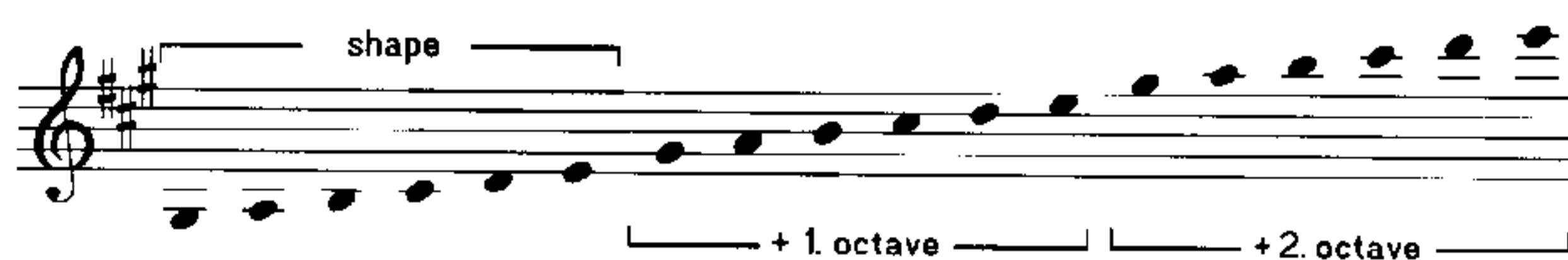
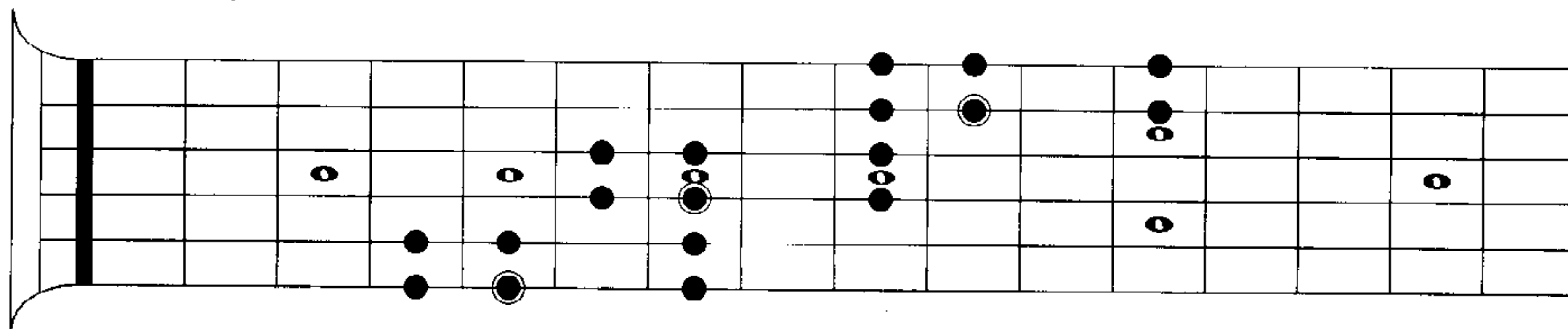
A - blues scale

X = blue note (b5)

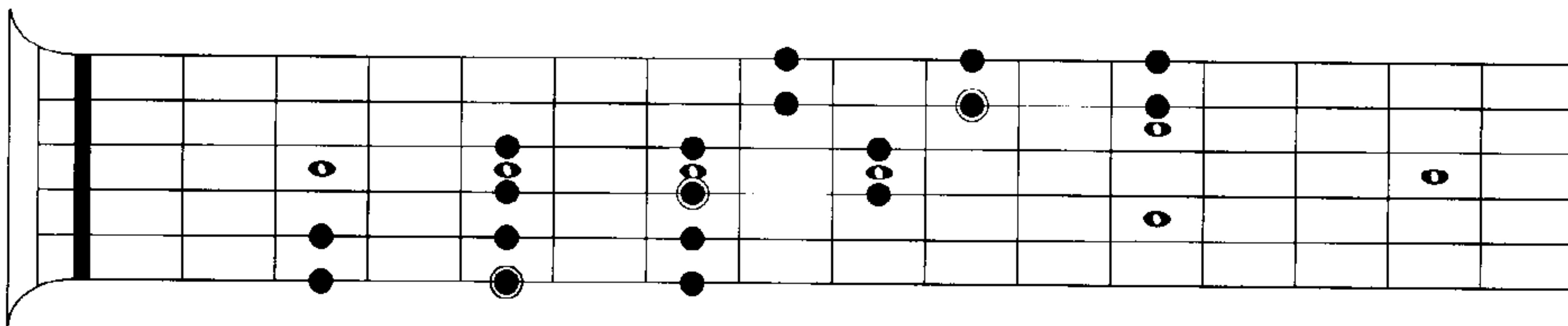
E - blues scale

Am - without b6

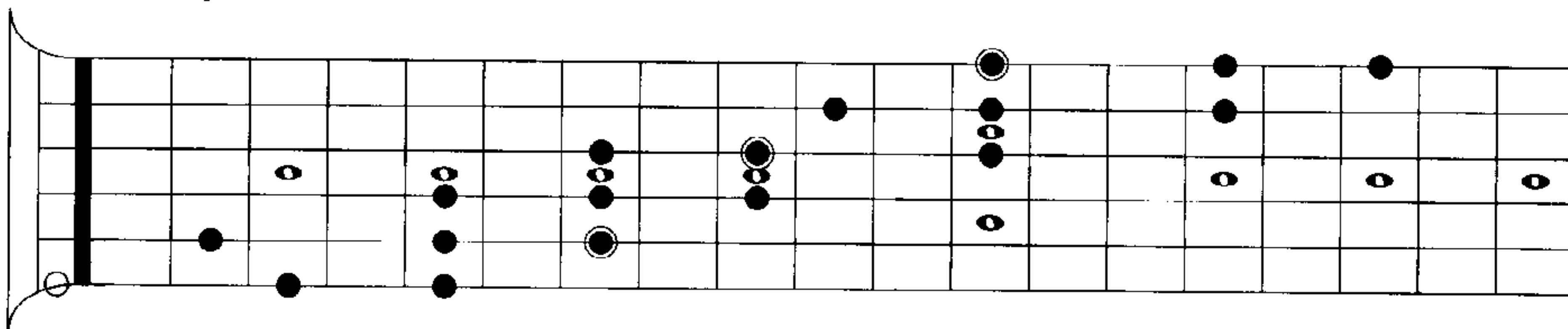
A - major without 6



Am - without b6



Em - pentatonic





As listening suggestions for legato technique, I'd recommend records from **Allan Holdsworth**, **Joe Satriani**, **Ritchie Kotzen** and **Alan Murphy** (see discography).

TIP: You'll find more legato licks in my book "**Masters of Rock Guitar**", in the chapters on the following guitarists:

Yngwie Malmsteen – Lick 13, 14 (pg. 118, 119); **Gary Moore** – Lick 5, 7 (pg. 123, 124);

Joe Satriani – Lick 2, 10, 11 (pg. 135, 138); **Steve Vai** – Lick 9, 10, 12 (pg. 146–147);

Paul Gilbert – Lick 11, 12 (pg. 155).

Chapter 9

TRIADIC ARPEGGIOS

Welcome to the Land of Arpeggios!

A major problem for a lot of guitarists is that their solo playing often sounds like scale exercises or a series of stuck-together licks. One way to avoid this kind of lame scale "doodling" is to use arpeggios.

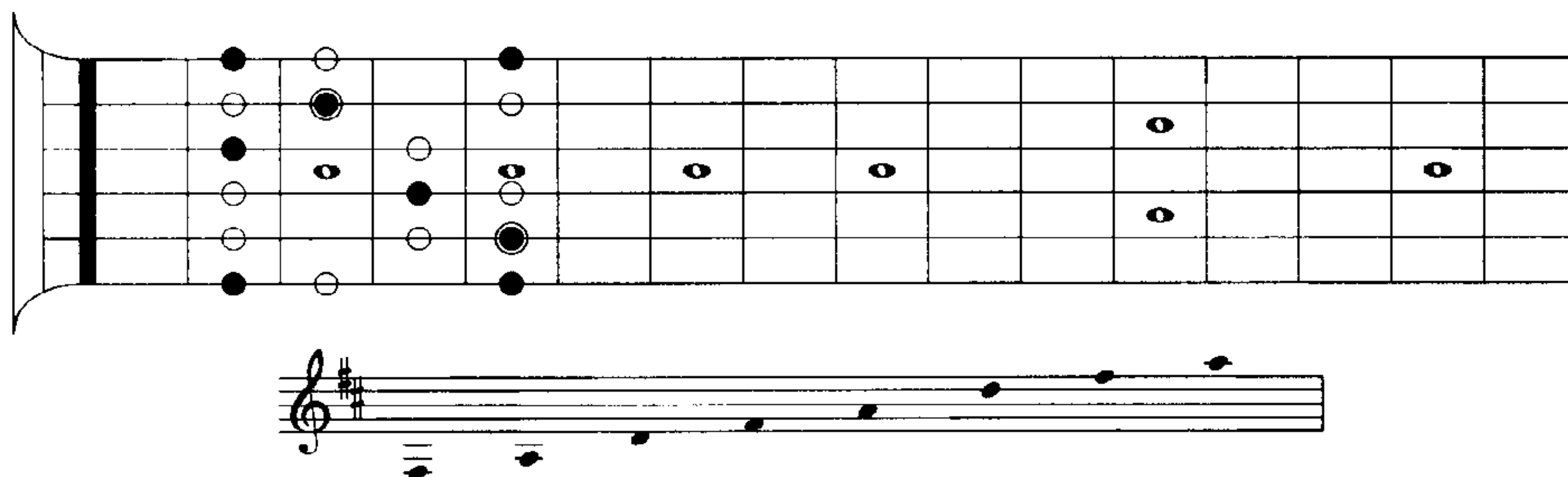
An arpeggio is defined as the notes of a chord played one after the other. I call them arps for short.

Arps are used in a wide variety of styles and in a lot of different ways. They're popular chiefly because they liberate you from scale doodling and, if used well, can give you many melodic ideas.

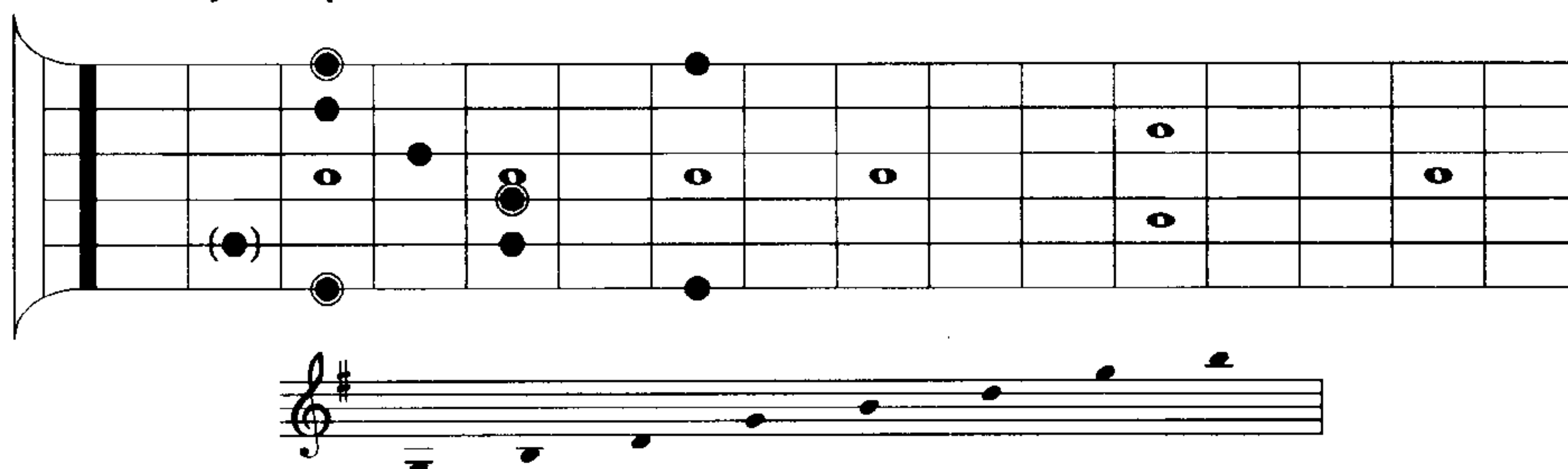
The first arps that you find here are different ways of breaking up the major and minor chords. Notice that these chords are triads, consisting merely of the root, the minor or major third, and the fifth.

Some of these arps stay in a single position on the fingerboard, while others take long, fast leaps over the frets. This will also help you to connect scale positions that don't lie adjacent to each other. So try to see the arps as fragments of the scale positions that you already know.

D major arp



G major arp



D major arp

The diagram shows a fingerboard for a stringed instrument with a 24-fret scale. The D major arpeggio is indicated by dots on the strings: D4 (open), E4 (1st fret), F#4 (2nd fret), G4 (3rd fret), A4 (4th fret), B4 (5th fret), and D5 (7th fret). The musical notation below shows the arpeggio in treble clef, D major key, starting on D4 and ascending to D5.

D major arp longform

The diagram shows a fingerboard for a stringed instrument with a 24-fret scale. The D major arpeggio is indicated by dots on the strings: D4 (open), E4 (1st fret), F#4 (2nd fret), G4 (3rd fret), A4 (4th fret), B4 (5th fret), and D5 (7th fret). The musical notation below shows the arpeggio in treble clef, D major key, starting on D4 and ascending to D5.

G major arp longform

The diagram shows a fingerboard for a stringed instrument with a 24-fret scale. The G major arpeggio is indicated by dots on the strings: G3 (open), A3 (1st fret), B3 (2nd fret), C#3 (3rd fret), D4 (4th fret), E4 (5th fret), and G4 (7th fret). The musical notation below shows the arpeggio in treble clef, G major key, starting on G3 and ascending to G4.

Dm arp

The diagram shows a fingerboard for a stringed instrument with a 24-fret scale. The D minor arpeggio is indicated by dots on the strings: D4 (open), E4 (1st fret), F4 (2nd fret), G4 (3rd fret), A4 (4th fret), B4 (5th fret), and D5 (7th fret). The musical notation below shows the arpeggio in treble clef, D minor key, starting on D4 and ascending to D5.

Gm arp

The diagram shows a guitar fretboard with a Gm arpeggio. The notes are G2 (open), Bb2 (1st fret), D3 (2nd fret), G3 (3rd fret), Bb3 (5th fret), and D4 (7th fret). Below the fretboard is a musical staff in G minor, showing the notes G, Bb, D, G, Bb, D in a sequence.

Dm arp

The diagram shows a guitar fretboard with a Dm arpeggio. The notes are D2 (open), F2 (1st fret), A2 (2nd fret), D3 (3rd fret), F3 (5th fret), and A3 (7th fret). Below the fretboard is a musical staff in D minor, showing the notes D, F, A, D, F, A in a sequence.

Dm arp longform

The diagram shows a guitar fretboard with a Dm arpeggio in long form. The notes are D2 (open), F2 (1st fret), A2 (2nd fret), D3 (3rd fret), F3 (5th fret), and A3 (7th fret). Below the fretboard is a musical staff in D minor, showing the notes D, F, A, D, F, A in a sequence.

Gm arp longform

The diagram shows a guitar fretboard with a Gm arpeggio in long form. The notes are G2 (open), Bb2 (1st fret), D3 (2nd fret), G3 (3rd fret), Bb3 (5th fret), and D4 (7th fret). Below the fretboard is a musical staff in G minor, showing the notes G, Bb, D, G, Bb, D in a sequence.

In the following exercise, arp finger positions 1 and 6 are used.

Exercise 25

Exercise 25 is a triadic arpeggio study in G major. The top staff shows the melody with triplet markings. The bottom staff shows the bass line with fingerings 1-6 and triplet markings.

This arpeggio study involves more difficult finger positions.

Exercise 20

Exercise 20 is a triadic arpeggio study in G major. The top staff shows the melody with slurs and fingerings. The bottom staff shows the bass line with slurs and fingerings.

Here are three licks consisting of arps.

Lick 36



G/A, A⁷

Lick 36 is a triadic arpeggio lick in G/A, A⁷. The top staff shows the melody with slurs and fingerings. The bottom staff shows the bass line with slurs and fingerings.

Lick 37



G/A, A⁷

Lick 37 is a triadic arpeggio lick in G/A, A⁷. The top staff shows the melody with slurs and fingerings. The bottom staff shows the bass line with slurs and fingerings.

Lick 38



G/A, A⁷

"And what about picking?" "Who cares?"

Try to play the licks and exercises with alternate picking as well as economy sweep picking (chapter 10, pg. 88), and stick with the technique that feels most natural to you.

PROJECT:

- Learn the arps!
- Record about five minutes of Amaj⁷ on tape (don't forget the groove and metronome) and try out the following:
 - 1 . A major scale
 - 2 . A major pentatonic
 - 3 . A major arp
 - 4 . D major pentatonic
 - 5 . D major arp
 - 6 . E major pentatonic
 - 7 . E major arp
 - 8 . Diatonic triads built on the steps of the A major scale (A major, B minor, C# minor, D major, E major, F# minor, G# diminished)
 - 9 . MIX 'EM UP!
- Play C and D major arpeggios over an Am⁷ chord.
- Listen to **Larry Carlton**, **Vinnie Moore** and **Mike Stern**.

Here's a small diagram that recaps which triads sound good over which chords.

C-major:	C	F	G	D (lydian sound)	E (pretty "outside")
C ⁷ :	C	F	B ^b		
C-minor:	F	B ^b	E ^b		

TIP:

Further licks with triadic arpeggios can be found in my book "Masters of Rock Guitar" in the chapters on the following guitarists:

Jeff Beck – Lick 3 (pg. 47); **Ritchie Blackmore** – Lick 6 (pg. 62);

Yngwie Malmsteen – Lick 1 (pg. 112).

Chapter 10

ECONOMY PICKING

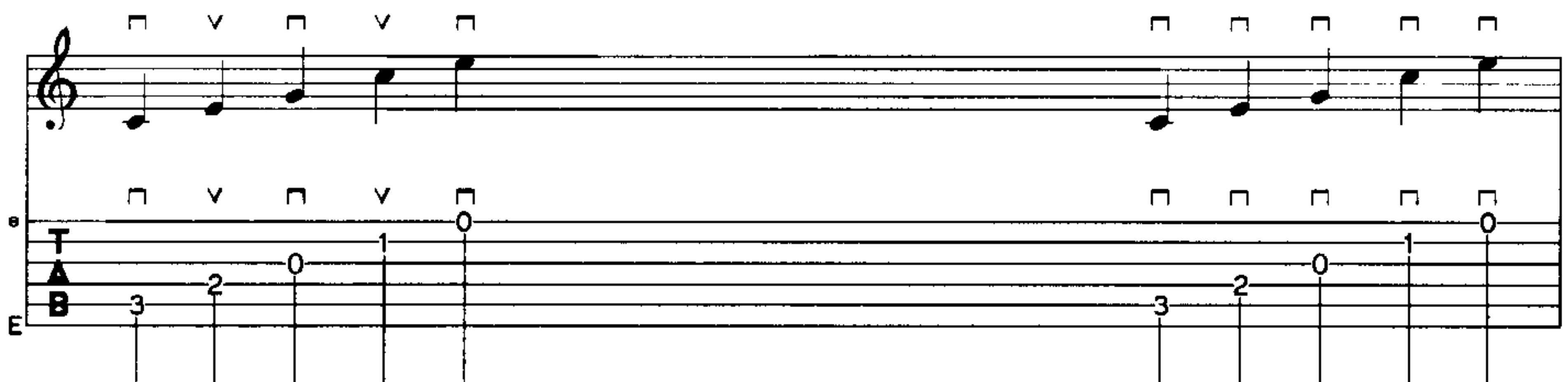
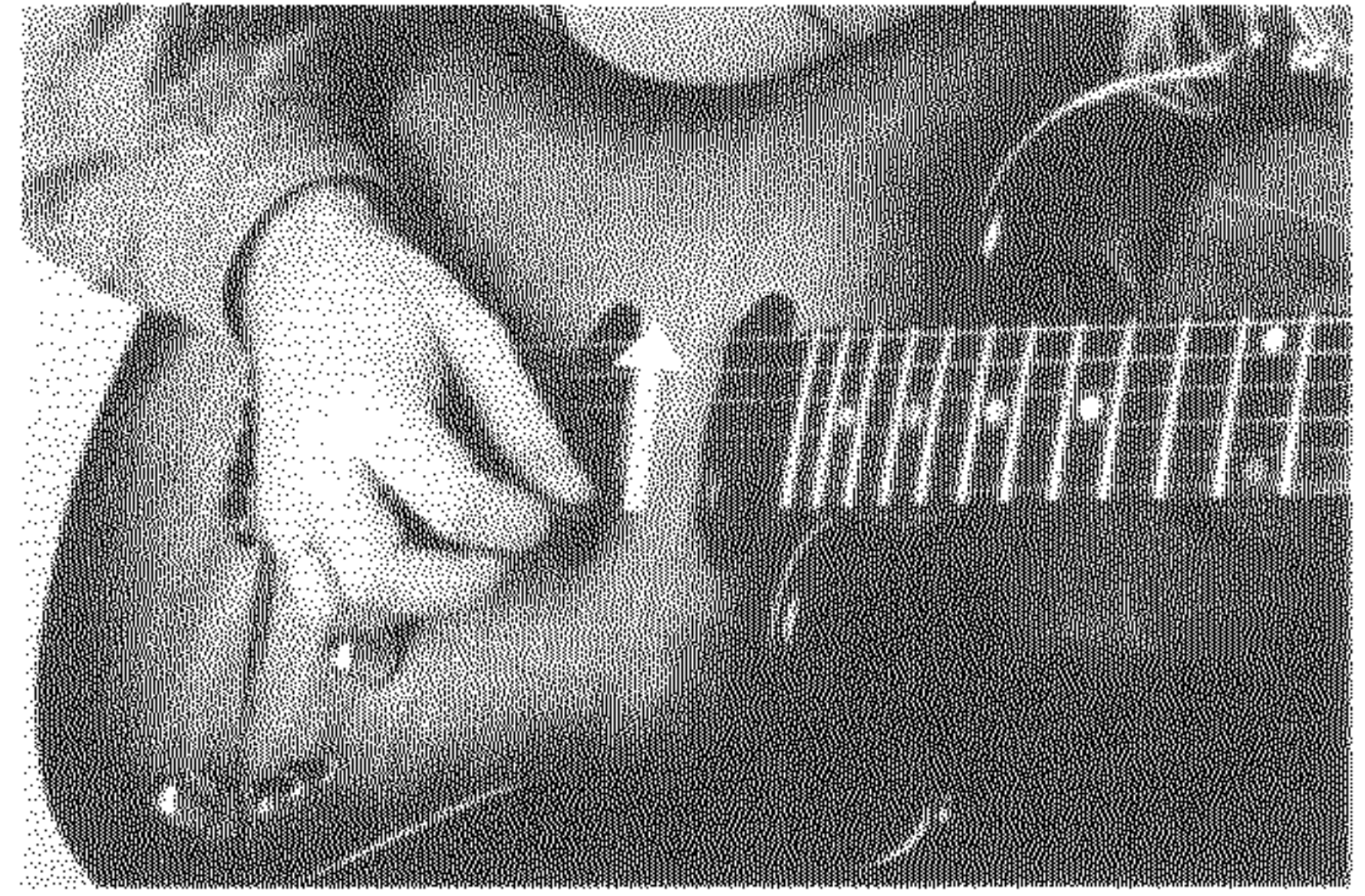
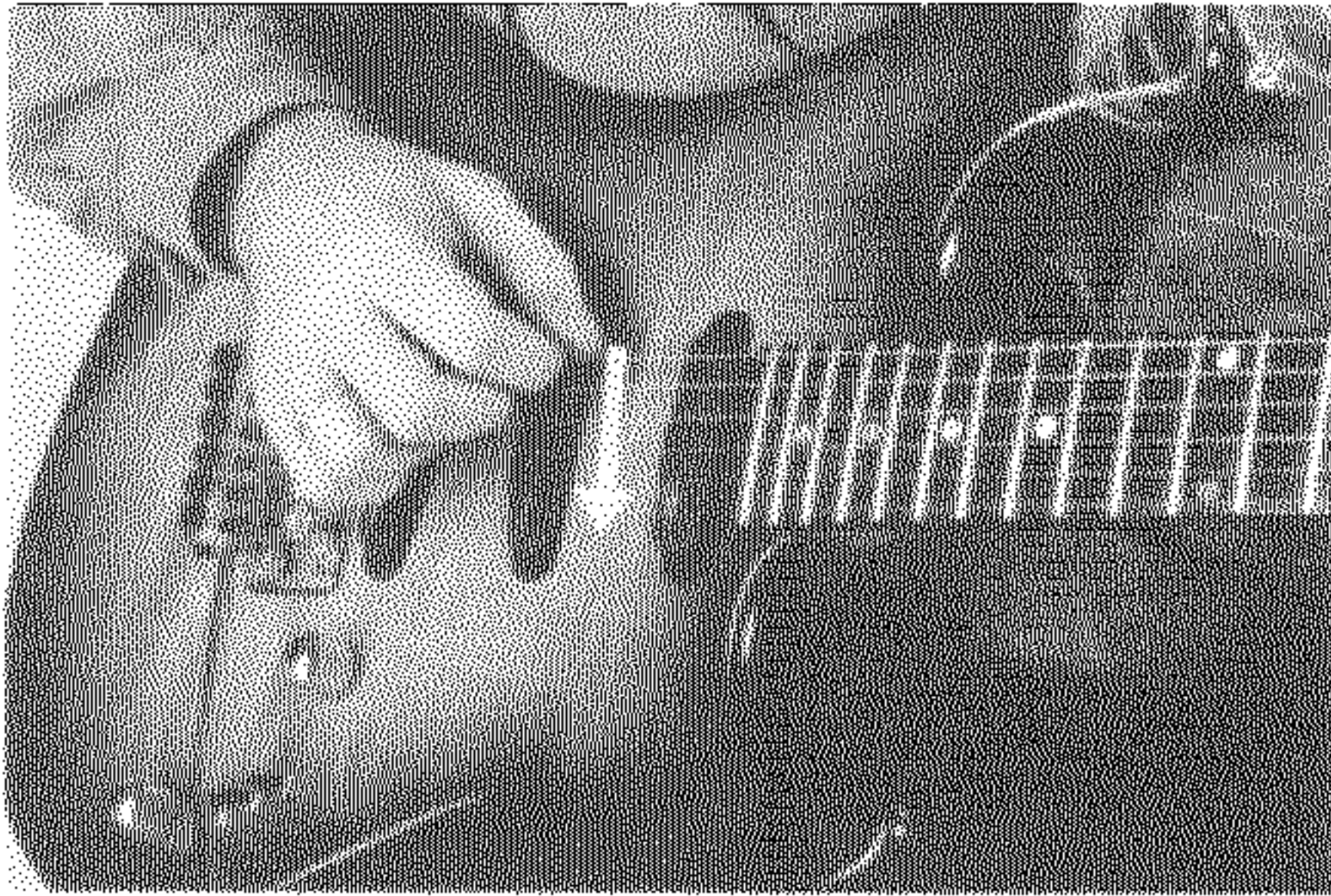
Sweeping

Scales

Arpeggios

In recent years guitarists like **Frank Gambale**, **Yngwie Malmsteen** and **Paul Gilbert** have greatly popularized a technique called sweeping (also called speed picking or economy picking).

In contrast to alternate picking, in this technique the direction of the picking stroke (up or down) seldom changes. One literally "sweeps" with a single broad hand motion over the strings in either an upward or a downward direction.



MUTING

Instead of five single attacks, here you just use one big one. It's important that the notes played on adjacent strings don't ring out over one another like they do when you play a chord. It will take some time before you attain the separation of tones by skilfully muting the strings with the right and the left hand. It's necessary to use the ball of your right hand to mute the lower strings and the forefinger of the left hand to mute the higher ones. And be careful not to sound the open strings by accident while taking your left hand off the neck.

You should also make sure that you use as small a picking motion as possible, as in alternate picking.

An important tip:

To short - cut a lot of trial and error work you should from the beginning keep in mind that in order to go forward in a picking direction one needs an uneven number of notes per string (1 - 3 - 5) and for a change of picking direction, an even number (2 - 4). This is the reason for the chromatic note at the end of the A scale in the last exercise.

With this in mind try the following exercise:

Exercise 29

So, how do the scales feel now, with this picking technique?

Here are groups-of-four which you already know, with economy picking.

Exercise 30

Of course it's basically up to you when and how you want to apply economy picking. I personally find that this technique is not so good for scale playing in hard rock and heavy metal with extremely overdriven amps because, compared to alternate picking, it's really hard to get a strong attack and attain more sound definition. This technique is more compatible with less distorted and more legato-oriented fusion sounds a la **Frank Gambale**.

With arpeggios it's another story:

SWEEPING AND ARPEGGIOS

A more flashy application of economy picking is the arpeggio style popularized by neo-classical metal representatives like **Vinnie Moore**, **Yngwie Malmsteen**, **Paul Gilbert**, **Tony MacAlpine**, and others. Once you get the hang of it, this technique allows you to play arps at astounding speeds.

In order to play the arpeggios as fast as possible, try to arrange your arpeggio fingerings so that you have only one note per string. If this isn't possible, play the other notes as hammer-ons so that you can keep the sound fluid..

Here are some licks with arps and sweeping:

Lick 39



Am

Lick 40



Dm⁷

Don't just try out the economy picking technique on these licks, but on all other arpeggios and licks in this book, as well as on your own ideas and licks, even if you sometimes only play two notes with a sweep. You'll probably discover that this will make things flow more naturally and fluently from your hands.

TIP:

You'll find more economy picking licks in my book "**Masters of Rock Guitar**" in the chapters on the following guitarists:

Yngwie Malmsteen – Lick 1, 2 (pg. 112, 113);

Steve Vai – Lick 7 (pg. 145);

Paul Gilbert – Lick 4, 6, 13 (pg. 152, 153, 155).

Chapter 11

FOUR-NOTE ARPEGGIOS

Standard and Longform Fingerings

The Jan Hammer Scale

Chord Substitutions

Welcome to Adventures in Arpland, Part 2!

In chapter 9 (pg. 81) we examined three-note arpeggios of major and minor chords; we'll now be moving on to the four-note seventh chords and their arpeggiations.

There are a number of good reasons for learning how to use these arps:

- They make the fingerboard easier to deal with, since the rough division into scale positions get's broken down further. This will help you break out of the rut of scale doodling and give you a deeper understanding of the scale.
- Arpeggios are made of chord tones. Chord tones are "home" notes, notes that one uses in improvisation to lead to, or resolve to. This helps you to create more musical melodies. Important and practically a prerequisite for learning how to apply these arps without problems is proficiency with the five major scale positions (see chapter 5, pg. 44), as the following arps are contained within them. So if you're not comfortable enough yet with these scales, I'd recommend going back to that chapter again.

THE FOUR CHORD TYPES

If you build up four-note diatonic chords on each note of a scale, the result looks like this:



Four different chord types are produced:

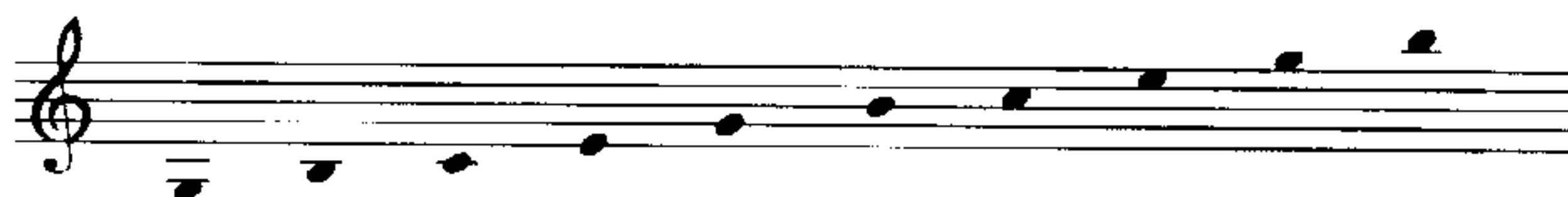
- 1) major⁷ 2) minor⁷ 3) dom⁷ 4) half-dimished

For each of the scale positions of the major scale, there is now one fingering position for each type of chord. So, to grasp the organization of the entire fingerboard, all you need to do is learn five arpeggios for each chord type. All together, that's only about 20 arpeggios to learn in order to have total comprehension. Not really that much, eh?

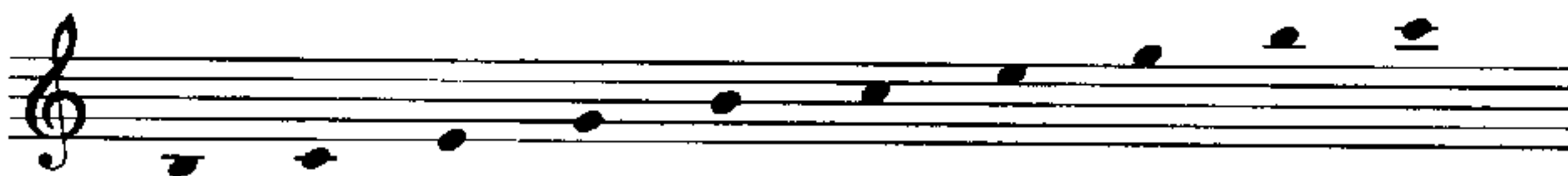
Here are the arpeggios. First try learning the five maj⁷ arps, then the m⁷ and then the rest. What's really important is to try to see the scale patterns surrounding the arps.

The five major 7 arps

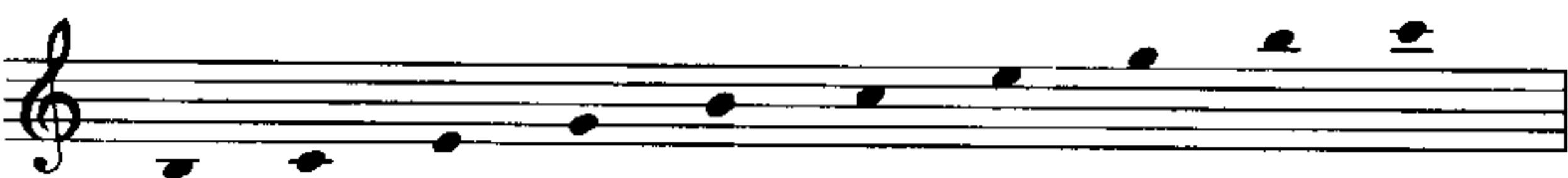
pattern 2
C Δ 7 arp.



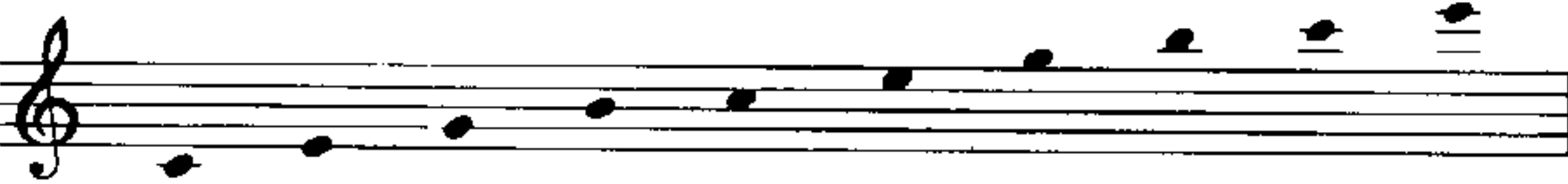
pattern 3
C Δ 7 arp.



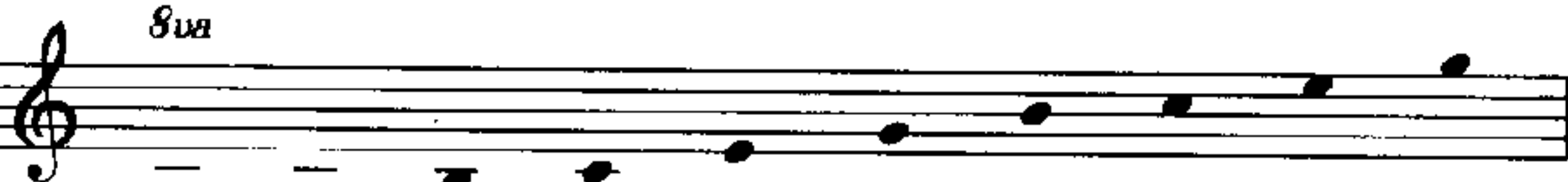
pattern 4
C Δ 7 arp.



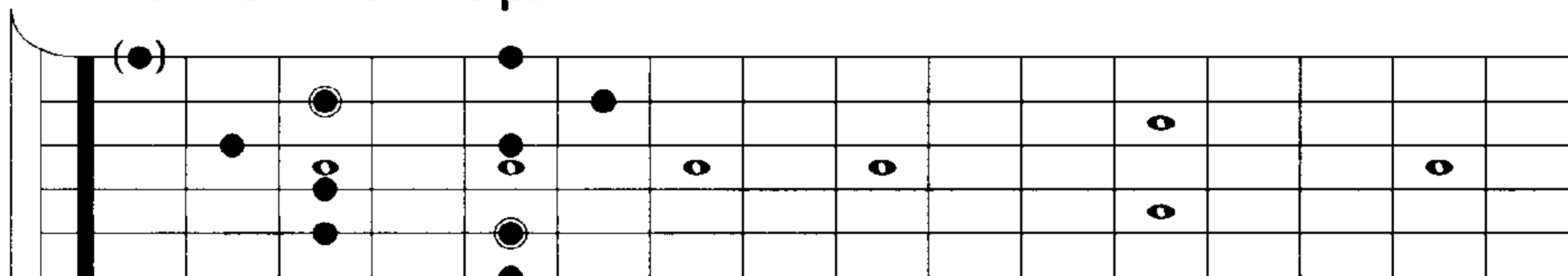
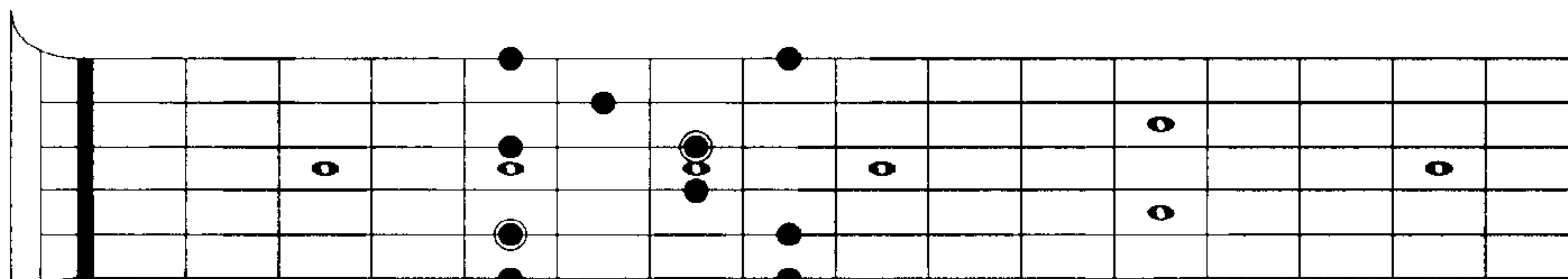
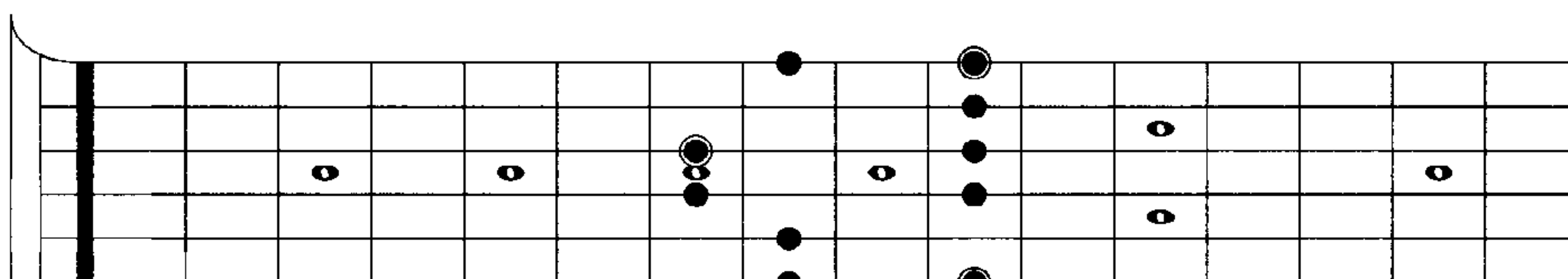
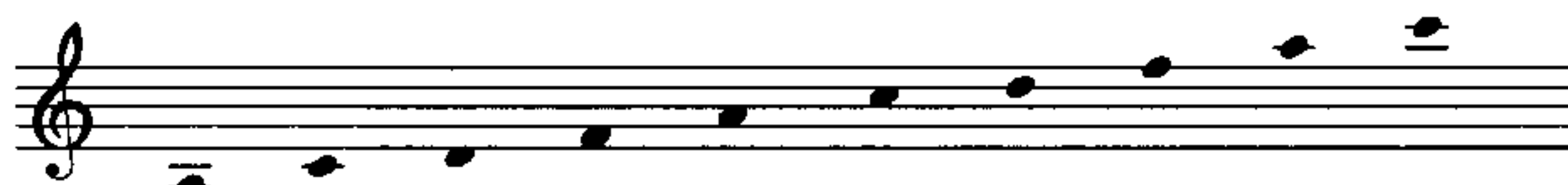
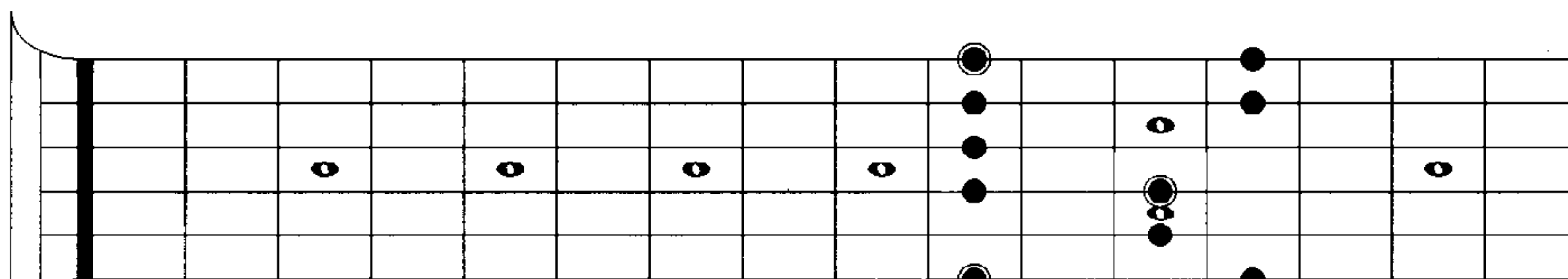
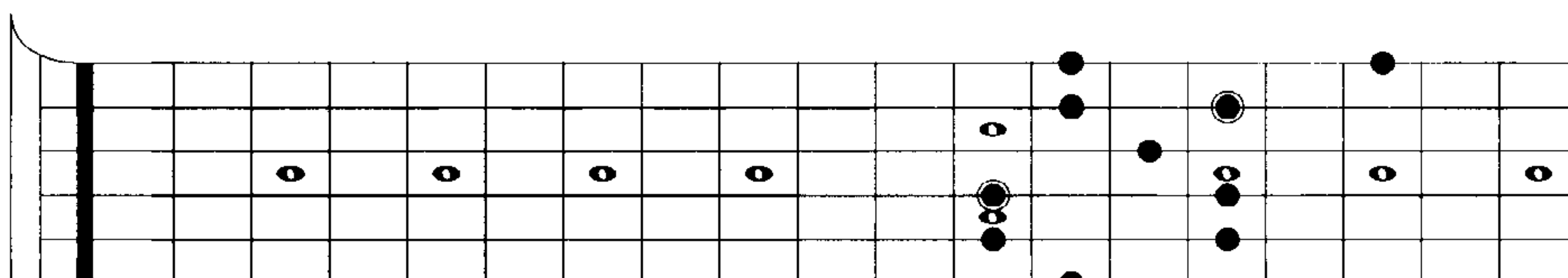
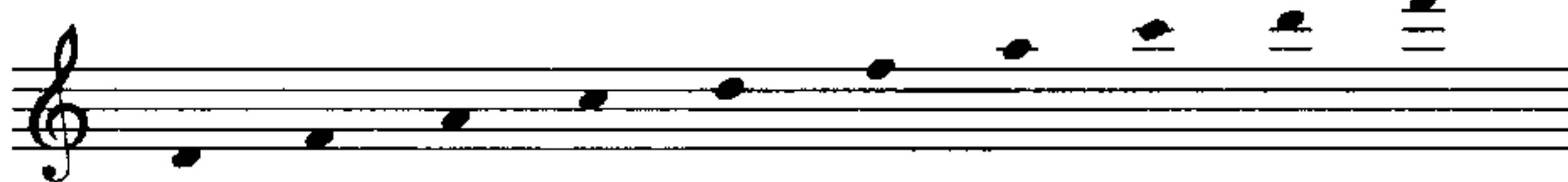
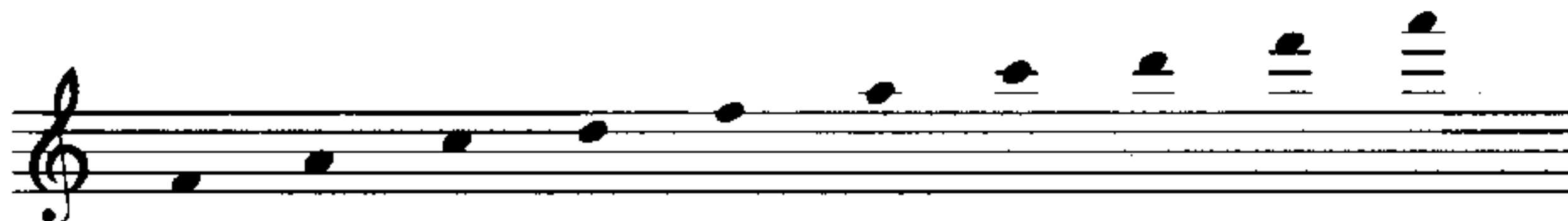
pattern 5
C Δ 7 arp.



pattern 1
C Δ 7 arp.

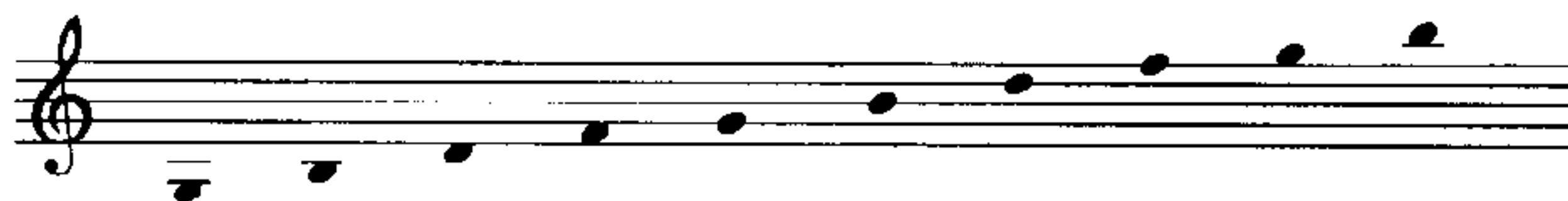


The five minor 7 arps

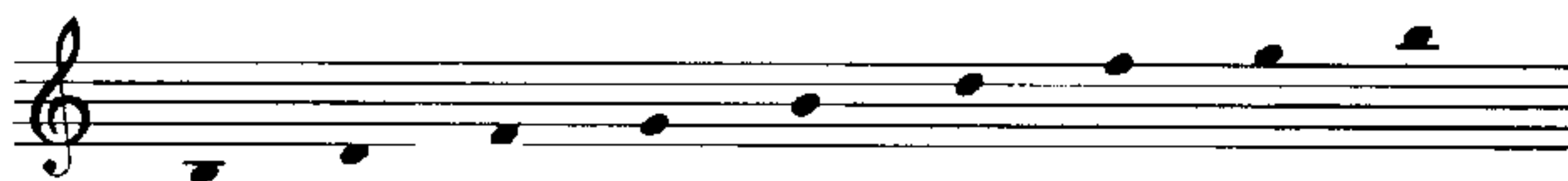
pattern 2
Dm⁷ arp.pattern 3
Dm⁷ arp.pattern 4
Dm⁷ arp.pattern 5
Dm⁷ arp.pattern 1
Dm⁷ arp.

the five dominant 7 arps

pattern 2
G⁷ arp.



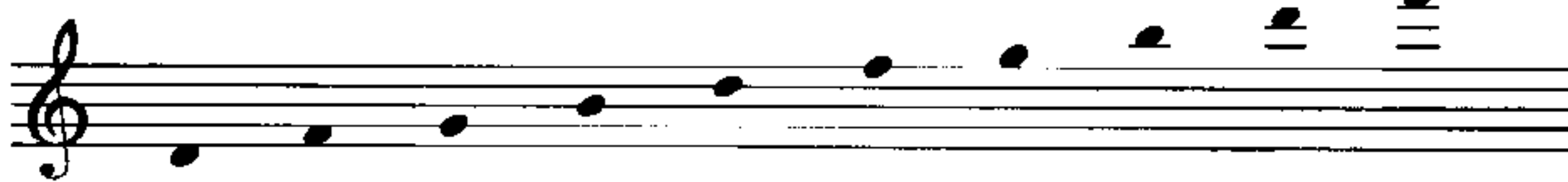
pattern 3
G⁷ arp.



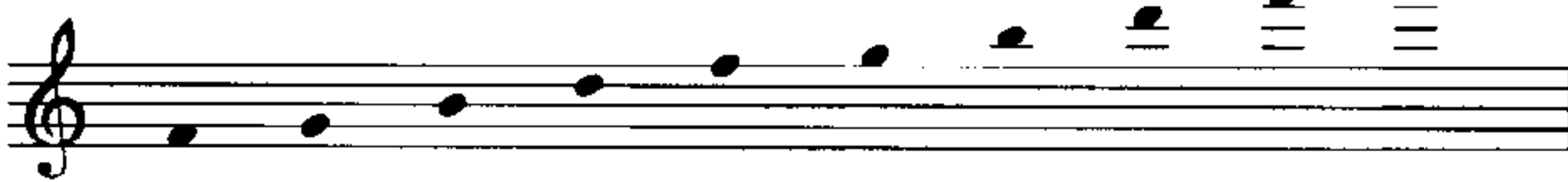
pattern 4
G⁷ arp.



pattern 5
G⁷ arp.



pattern 1
G⁷ arp.



The five minor 7^b5 (half-diminished) arps

pattern 2
Bm^{7b5} arp.

Fretboard diagram showing the Bm^{7b5} arpeggio pattern 2. The notes are: B1, D2, F#2, A2, C#3, E3, G3, B3, D4, F#4, A4, C#5, E5, G5, B5, D6, F#6, A6, C#7, E7, G7, B7, D8, F#8, A8, C#9, E9, G9, B9, D10, F#10, A10, C#11, E11, G11, B11, D12, F#12, A12, C#13, E13, G13, B13, D14, F#14, A14, C#15, E15, G15, B15, D16, F#16, A16, C#17, E17, G17, B17, D18, F#18, A18, C#19, E19, G19, B19, D20, F#20, A20, C#21, E21, G21, B21, D22, F#22, A22, C#23, E23, G23, B23, D24, F#24, A24, C#25, E25, G25, B25, D26, F#26, A26, C#27, E27, G27, B27, D28, F#28, A28, C#29, E29, G29, B29, D30, F#30, A30, C#31, E31, G31, B31, D32, F#32, A32, C#33, E33, G33, B33, D34, F#34, A34, C#35, E35, G35, B35, D36, F#36, A36, C#37, E37, G37, B37, D38, F#38, A38, C#39, E39, G39, B39, D40, F#40, A40, C#41, E41, G41, B41, D42, F#42, A42, C#43, E43, G43, B43, D44, F#44, A44, C#45, E45, G45, B45, D46, F#46, A46, C#47, E47, G47, B47, D48, F#48, A48, C#49, E49, G49, B49, D50, F#50, A50, C#51, E51, G51, B51, D52, F#52, A52, C#53, E53, G53, B53, D54, F#54, A54, C#55, E55, G55, B55, D56, F#56, 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A608, C#609, E609, G609, B609, D610, F#610, A610, C#611, E611, G611, B611, D612, F#612, A612, C#613, E613, G613, B613, D614, F#614, A614, C#615, E615, G615, B615, D616, F#616, A616, C#617, E617, G617, B617, D618, F#618, A618, C#619, E619, G619, B619, D620, F#620, A620, C#621, E621, G621, B621, D622, F#622, A622, C#623, E623, G623, B623, D624, F#624, A624, C#625, E625, G625, B625, D626, F#626, A626, C#627, E627, G627, B627, D628, F#628, A628, C#629, E629, G629, B629, D630, F#630, A630, C#631, E631, G631, B631, D632, F#632, A632, C#633, E633, G633, B633, D634, F#634, A634, C#635, E635, G635, B635, D636, F#636, A636, C#637, E637, G637, B637, D638, F#638, A638, C#639, E639, G639, B639, D640, F#640, A640, C#641, E641, G641, B641, D642, F#642, A642, C#643, E643, G643, B643, D644, F#644, A644, C#645, E645, G645, B645, D646, F#646, A646, C#647, E647, G647, B647, D648, F#648, A648, C#649, E649, G649, B649, D650, F#650, A650, C#651, E651, G651, B651, D652, F#652, A652, C#653, E653, G653, B653, D654, F#654, A654, C#655, E65

PROJECT:

- Play a Cmaj7 chord in the 3rd position.

Now play the second pattern of the C major scale from C to C (see pg. 43).

Now play the Cmaj7 arp that's derived from this pattern.

Can you see the close relationship between chord, scale and arpeggio now?
When you play an arpeggio you're never in danger of hitting a wrong note.

- Proceed in a like manner with the six other diatonic chords.
- Play this exercise in other patterns, as well.
- Play the arpeggios in groups of three and groups of four.
- What about another key?
- Play a Cmaj⁷ arp over an Am⁷.
- Play over an A¹³ chord:

1) D^{Δ7}arp

2) G^{Δ7}arp

3) E^{Δ7}arp

- Play over an A^{Δ7} :

1) A^{Δ7}arp

2) E^{Δ7}arp

3) G[#]m⁷arp

LONG FORM FINGERINGS

There are a number of other fingerings in addition to the arpeggio fingerings already mentioned. The following ones are designed to bring you from one area of the fingerboard to the next.

C Δ 7arp (longform)

The diagram illustrates the long form of a C Δ 7arp guitar chord. The top part is a fretboard diagram with a 6-string, 24-fret grid. The chord is played in the key of C major, with the root note C on the open 1st string. The notes are: C (1st string, open), E (2nd string, 2nd fret), G (3rd string, 3rd fret), Bb (4th string, 4th fret), D (5th string, 2nd fret), and F (6th string, 3rd fret). The bottom part shows the musical notation for this chord on a single staff with a treble clef. The notes are C4 (quarter), E4 (quarter), G4 (quarter), Bb4 (quarter), D5 (quarter), and F5 (quarter), all beamed together.

Cm⁷arp (longform)

The diagram shows the Cm⁷arp (longform) chord across a fretboard and a musical staff. The fretboard is a 6x12 grid. The chord is represented by black dots: C2 (open), C3 (1st fret), D3 (2nd fret), E3 (3rd fret), F3 (3rd fret), G3 (4th fret), A3 (5th fret), B3 (5th fret), C4 (5th fret), D4 (6th fret), E4 (6th fret), F4 (6th fret), G4 (7th fret), A4 (7th fret), B4 (7th fret), and C5 (7th fret). The musical staff is in C minor, showing the notes C2, C3, D3, E3, F3, G3, A3, B3, C4, D4, E4, F4, G4, A4, B4, and C5.

C⁷arp (longform)

Diagram of a guitar fretboard showing the C⁷arp (longform) scale. The scale is played across 12 frets on the 6th, 5th, 4th, and 3rd strings. The notes are: 6th string (1st fret: C, 2nd fret: D, 3rd fret: E), 5th string (2nd fret: F, 3rd fret: G, 4th fret: A), 4th string (2nd fret: B, 3rd fret: C, 4th fret: D), and 3rd string (2nd fret: E, 3rd fret: F, 4th fret: G, 5th fret: A, 6th fret: B, 7th fret: C). The diagram includes a treble clef and a key signature of one flat (Bb).

Cm^{7b5arp} (longform)

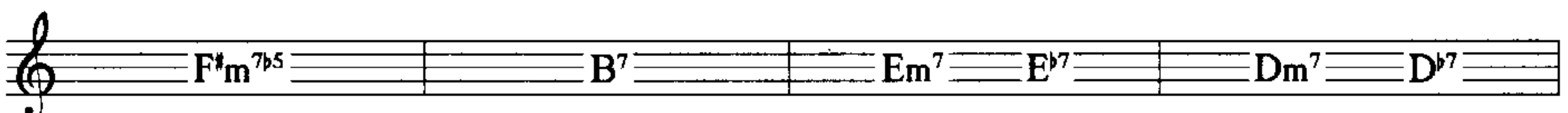
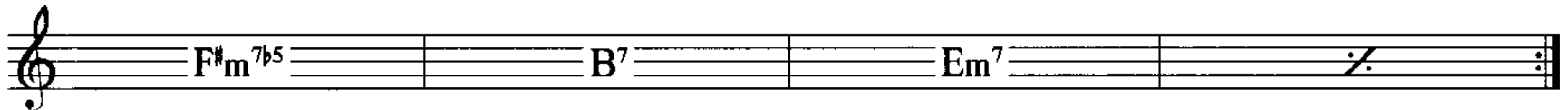
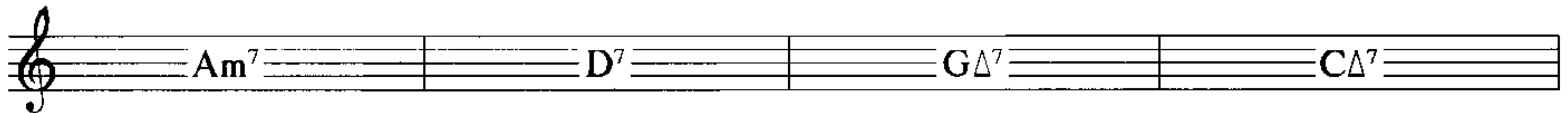
The best way to practice arps is of course in a musical situation - a song or a chord progression.

Here's a relatively easy progression. Although the harmonies are a bit jazzy, that doesn't mean you have to play them that way.

Feel free to record it with some distortion and a rock back-beat.

Jamtrack 20

29
CD INDEX



Now try to play non-stop eighth-note arpeggios over this progression, only using notes from the arpeggios of the chords. Try to get as fluid as possible in changing from one chord to the next.

Here's one way it might look.

Exercise 31**30**
CD INDEX

The exercise consists of four systems of eighth-note arpeggios over a chord progression in D major. Each system includes a treble clef staff with notes and a bass staff with fret numbers. The chords are Am7, D7, GΔ7, CΔ7, F#m7b5, B7, and Em7.

System 1: Am7, D7, GΔ7, CΔ7

System 2: F#m7b5, B7, Em7

System 3: Am7, D7, GΔ7, CΔ7

System 4: F#m7b5, B7, Em7

F#m^{7b5} **B⁷** **Em⁷**

Am⁷ **D⁷** **GΔ⁷**

F#m^{7b5} **B⁷** **Em⁷** **E^{b7}** **Dm⁷** **D^{b7}**

CΔ⁷ **B^{7b9}** **Em⁷**

Although this is more of a Jazz technique, I (a sworn rocker) found, while studying at GIT, that it opened up new worlds for me. Along with really getting to know the guitar neck and learning about 3 or 4 arpeggiated pieces, these arp connections were very helpful to me for developing technique.

PROJECT:

- Find the music (for example, in the Real Book) for the following pieces and work on them using the method mentioned above:

"All the Things You Are"

and

"Joy Spring".

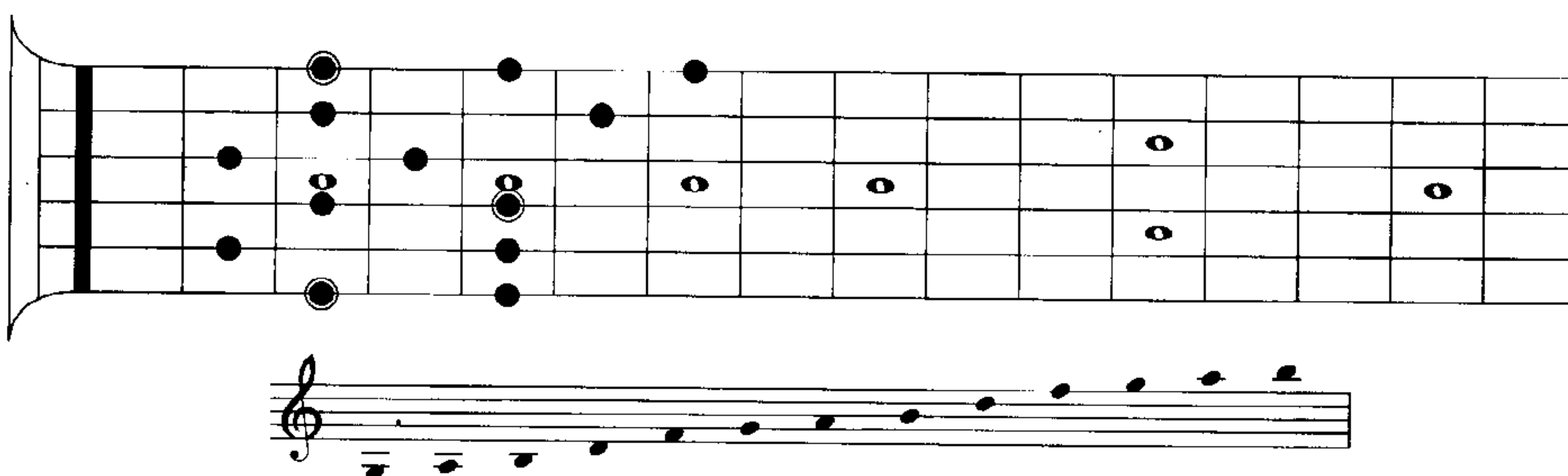
Although these songs are jazz standards, it does NOT mean they have to be played that way. My suggestion: a rock groove, eighth-note rock bass and crunch chords, and off you go: jazz on 11.

Beside being the ultimate way of getting to know the fretboard, arps are, of course, great for improvising. Remember that you're basically playing in the same fingering positions as when you look at the fingerboard through "scale position glasses". Arpeggios, though, sound a lot more colorful and melodic.

These extended arps are also very good for improvising. They are extensions of the dominant seventh arps and sound particularly good in rock and blues.

The following finger position is for the G^9 ($G^{7/9}$) arp (1 - 9 (2) - 3 - 5 - $b7$). Some guitarists call this five-note arp the dominant pentatonic. **John Scofield** uses it frequently.

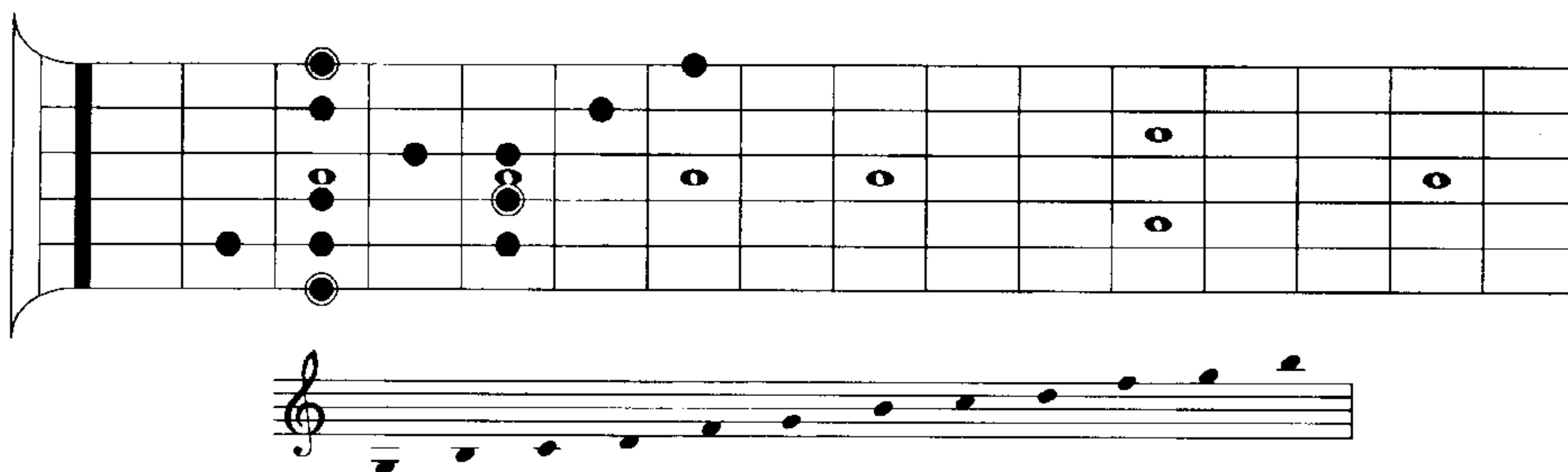
$G^{7/9}$ arp



THE JAN HAMMER SCALE

Here the G^7 arp is extended to include the fourth (1 - 3 - 4 - 5 - $b7$) It's used a lot by Jeff Beck and Jan Hammer, and for this reason it's often called the Jan Hammer scale.

$G^{7/4}$ arp

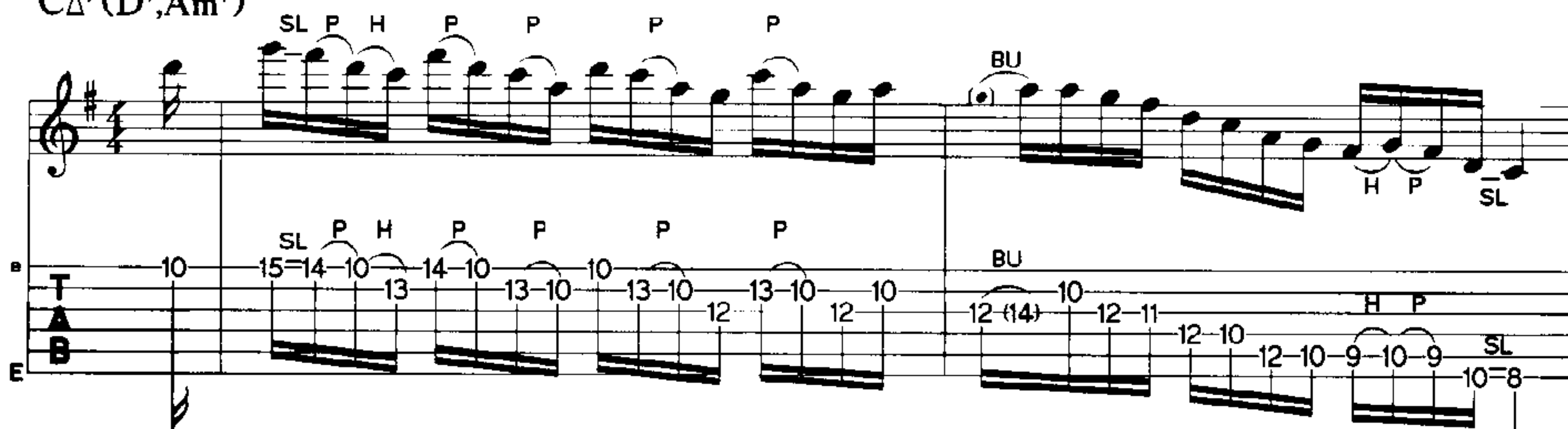


Here's another cool lick:

Lick 41

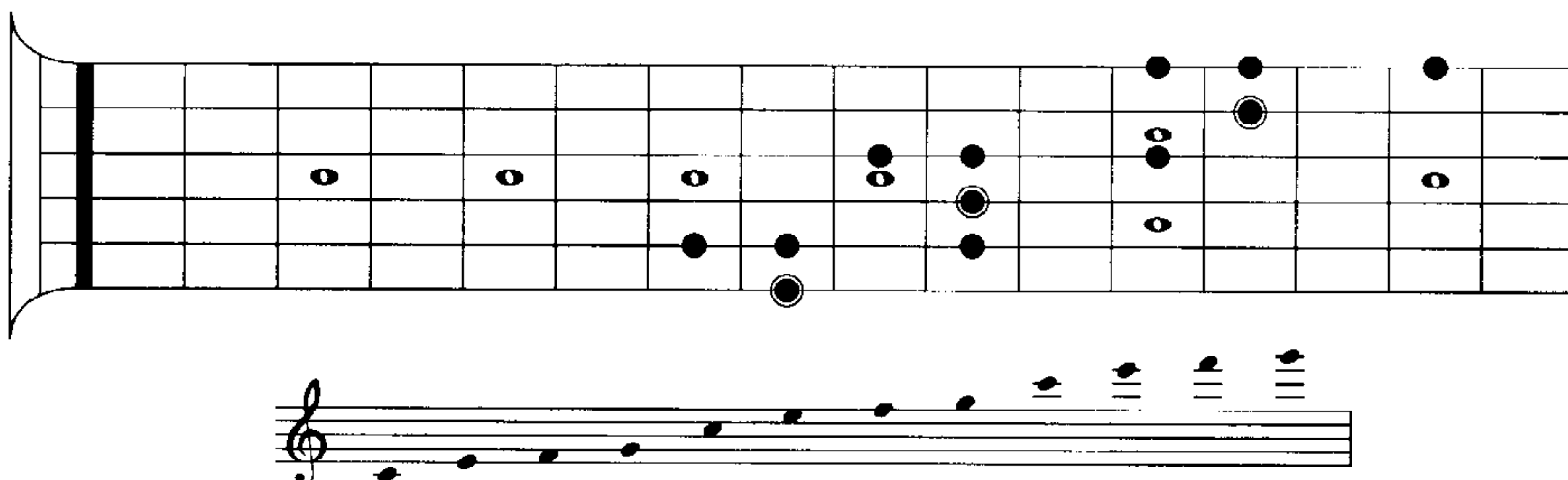
30
CD INDEX

$C\Delta^7(D^7, Am^7)$



The following extended arpeggio can be heard particularly well on the Allman Brothers' song "Jessica". It sounds really good over $Fmaj^7$, G^7 and Dm^7 .

C^{add4} arp



PROJECT

- Record the following progression on tape:



- Now play the following intervals as tremolo over it and notice their sound color:
9 - #11 - 13
- Now record the same chord progression with dominant chords and try the following interval extensions:
b9 - 9 - #9 #11 #5
- Also expand the maj⁷ to maj⁹, m⁷ to m⁹, and m^{7b5} to m^{7b5b9} arpeggio.
- Try this with other patterns as well.

CHORD SUBSTITUTION

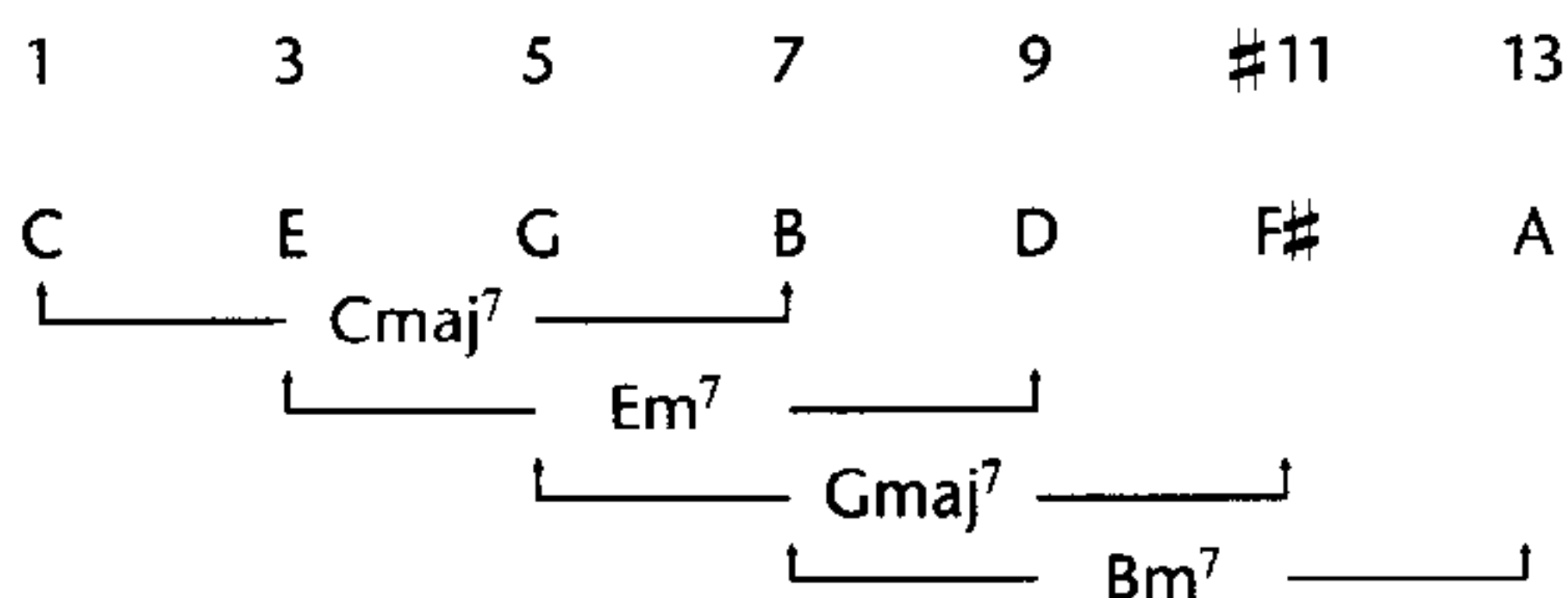
Besides ninth arpeggios, arps can be extended further to 11th and 13th arps. Remembering all the new fingering positions for them would be an undertaking of gigantic proportions. There's another concept that can be used for this purpose:

The magic word here is **chord substitution**, and this concept is much simpler than it sounds. All you need for it are normal four-voiced arps. Here is the principle:

- Play a C maj⁷ chord (C - E - G - B)
- Play an Em⁷ arp over it (E - G - B - D)
- Now add the notes together, and you get C - E - G - B - D = Cmaj⁹

Whether or not you integrate the C note into the arpeggio doesn't change the sound. It sounds like Cmaj⁹ although you're playing Em⁷. You can also come up with the other extensions with this system:

- over Cmaj⁷:

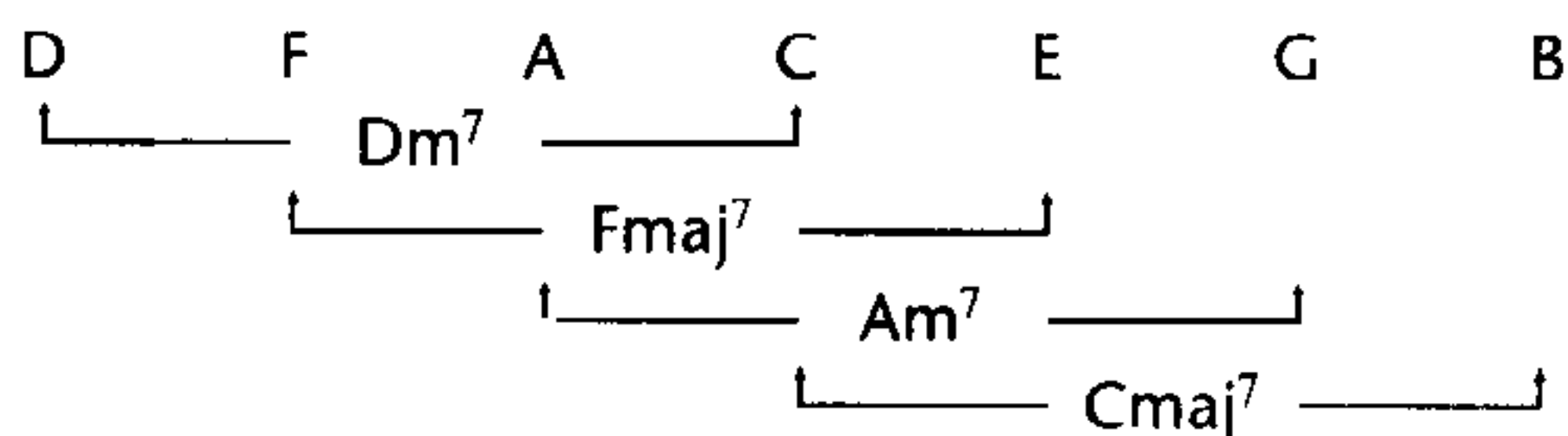


(Lydian = 4th mode of G major)
sounds brighter than the ionian

Em ^{7arp}	=	Cmaj ⁹
Gmaj ^{7arp}	=	Cmaj ^{9#11}
Bm ^{7arp}	=	Cmaj ¹³

- Over Dm⁷:

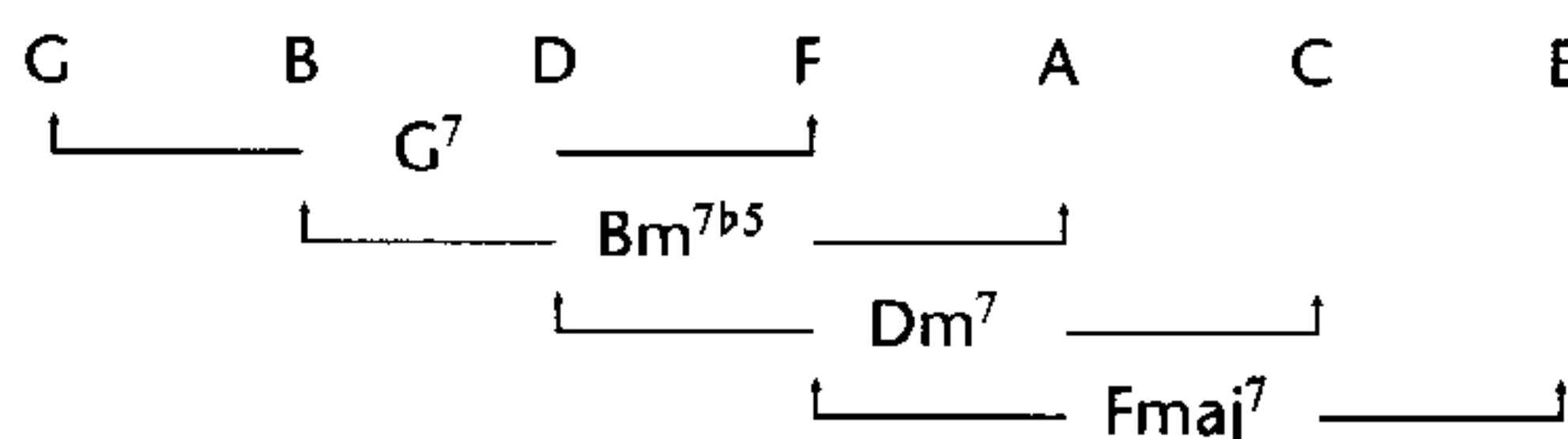
1 b3 5 b7 9 11 13 (Dorian = 2nd mode of C major)



$$\begin{aligned} \text{Fmaj}^{7\text{arp}} &= \text{Dm}^9 \\ \text{Am}^{7\text{arp}} &= \text{Dm}^{11} \\ \text{Cmaj}^7 &= \text{Dm}^{13} \end{aligned}$$

- over G⁷:

1 3 5 b7 9 11 13 (Mixolydian = 5th mode of C major)



$$\begin{aligned} \text{Bm}^{7b5\text{arp}} &= \text{G}^9 \\ \text{Dm}^{7\text{arp}} &= \text{G}^{11} \\ \text{Fmaj}^{7\text{arp}} &= \text{G}^{13} \end{aligned}$$

This concept is a lot easier to apply than it might seem here. But, as you've seen, arps are good for more than just lightning fast sweeps over the fingerboard.

PROJECT:

- Record a couple of minutes of Em⁷ on tape. Now play over it:

- 1) Em^{7arp}
- 2) Bm^{7arp}
- 3) Gmaj^{7arp}
- 4) Dmaj^{7arp}
- 5) C#m^{7b5arp}
- 6) Em^{9arp}
- 7) Bm^{9arp}
- 8) Gmaj^{9arp}
- 9) Dmaj^{9arp}
- 10) C#m^{7b5b9arp}
- 11) A^{7/4arp}

- Play over an E⁷ chord:

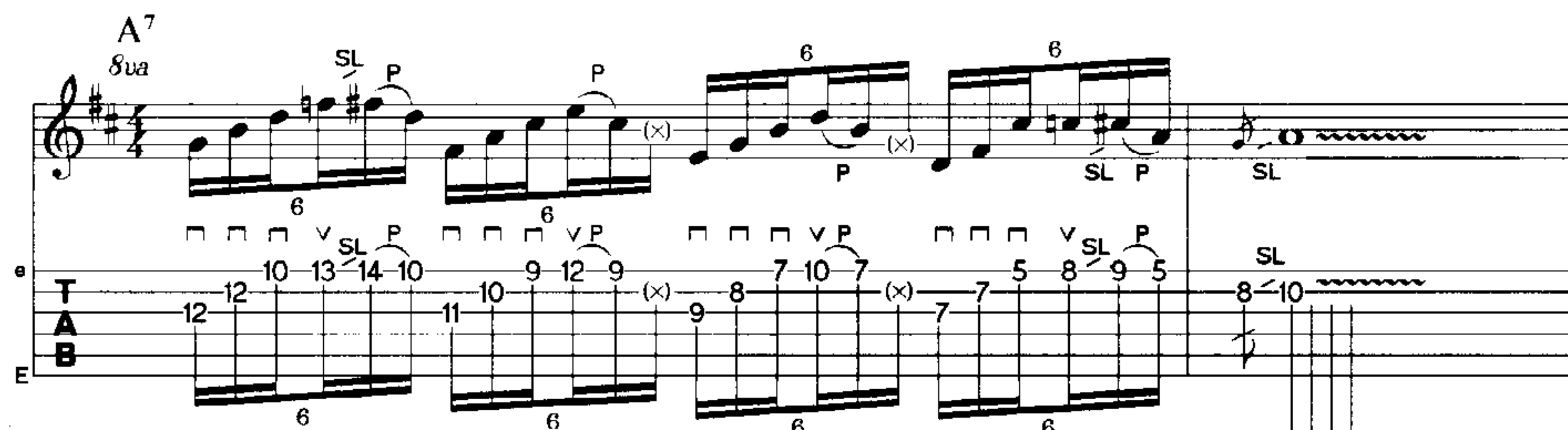
- 1) E-mixolydian
- 2) D-major pentatonic
- 3) G#m^{7b5arp}
- 4) Bm^{9arp}
- 5) Dmaj^{9arp}
- 6) Amaj^{7arp}

As a listening tip for arps, I can recommend Larry Carlton, Vinnie Moore and Frank Gambale.

Here are some cool arp licks to wrap things up:

Lick 42

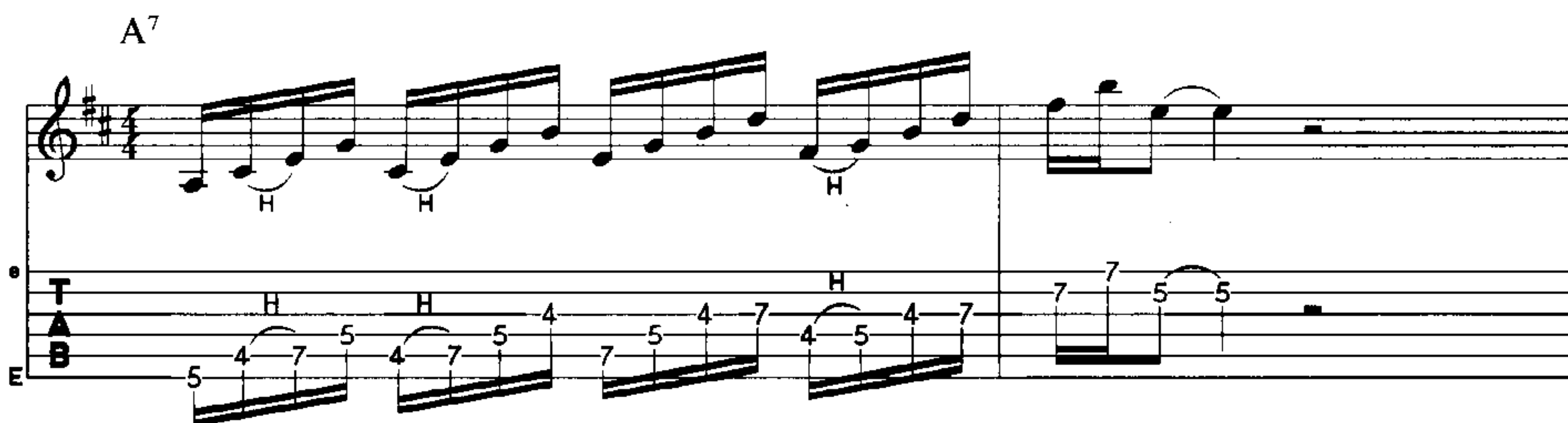
30
CD INDEX



Musical notation for Lick 42, A7 8va. The notation is written on a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. The lick consists of a series of eighth and sixteenth notes, with some notes marked with 'SL' (slide) and 'P' (pull-off). The notation includes a guitar-specific staff with fret numbers (12, 10, 13, 14, 10, 11, 10, 9, 12, 9, 9, 8, 7, 10, 7, 7, 5, 8, 9, 5, 8, 10) and a bass staff with fret numbers (6, 6, 6, 6). The lick is marked with a '30' and 'CD INDEX' label.

Lick 43

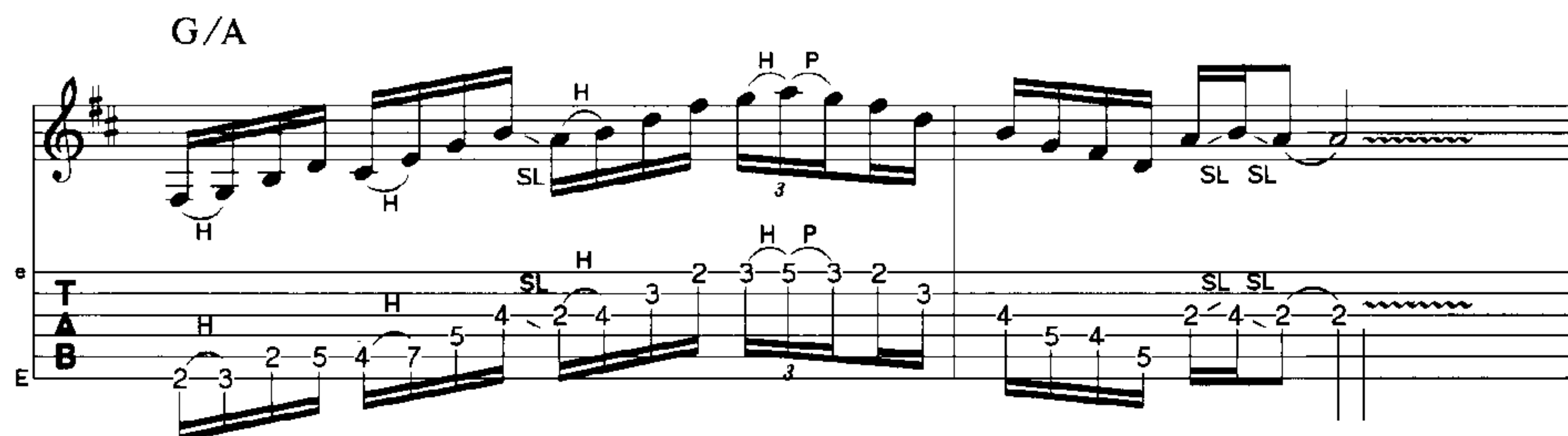
30
CD INDEX



Musical notation for Lick 43, A7. The notation is written on a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. The lick consists of a series of eighth and sixteenth notes, with some notes marked with 'H' (hammer-on) and 'P' (pull-off). The notation includes a guitar-specific staff with fret numbers (5, 4, 7, 5, 4, 7, 5, 4, 7, 5, 4, 7, 4, 5, 4, 7, 7, 7, 5, 5) and a bass staff with fret numbers (5, 4, 7, 5, 4, 7, 5, 4, 7, 4, 5, 4, 7, 7, 7, 5, 5). The lick is marked with a '30' and 'CD INDEX' label.

Lick 44

30
CD INDEX



Musical notation for Lick 44, G/A. The notation is written on a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. The lick consists of a series of eighth and sixteenth notes, with some notes marked with 'H' (hammer-on), 'P' (pull-off), and 'SL' (slide). The notation includes a guitar-specific staff with fret numbers (2, 3, 2, 5, 4, 7, 5, 4, 2, 4, 3, 2, 3, 5, 3, 2, 3, 4, 5, 4, 5, 2, 4, 2, 2) and a bass staff with fret numbers (2, 3, 2, 5, 4, 7, 5, 4, 2, 4, 3, 2, 3, 5, 3, 2, 3, 4, 5, 4, 5, 2, 4, 2, 2). The lick is marked with a '30' and 'CD INDEX' label.

TIP:

You'll find more licks with four-voiced arpeggios in my book "Masters of Rock Guitar", in the chapters on the following guitarists:

- Jeff Beck – Lick 2, 3, (pg. 47);
- Yngwie Malmsteen – Lick 2 (pg. 112);
- Gary Moore – Lick 8 (pg. 124);
- Joe Satriani – Lick 3, 8 (pg. 135, 137);
- Paul Gilbert – Lick 5 (pg. 152).

Chapter 12

STRING SKIPPING TECHNIQUE

Scales

Arpeggios

Sequences

Repeating Patterns

Licks

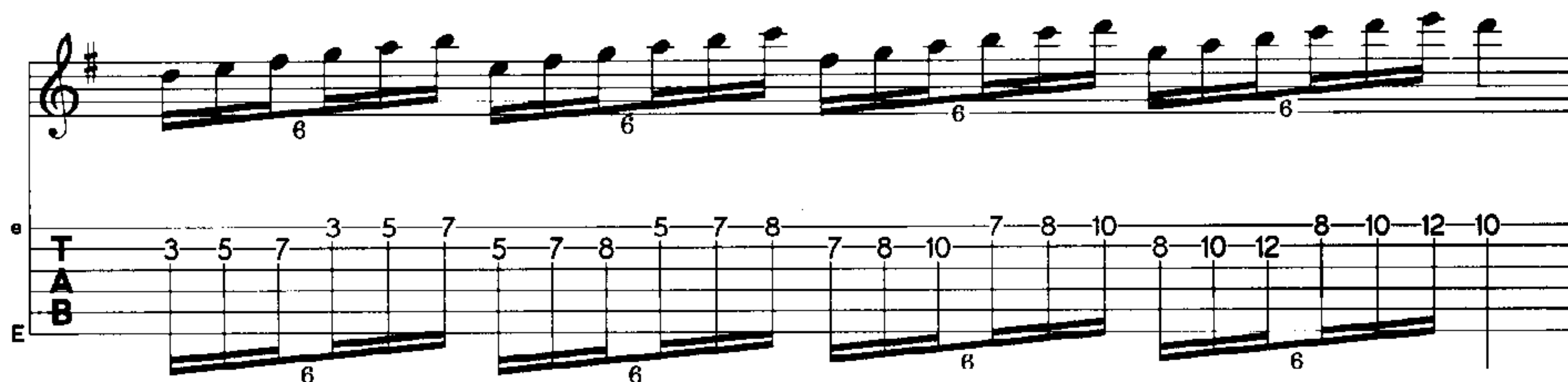


A technique called string skipping has become very popular in recent years. What's involved here, aside from the terror licks a la **Paul Gilbert**, **Ritchie Kotzen** and **Allan Holdsworth**, is actually nothing more than playing familiar stuff using somewhat unusual fingering positions and large interval skips. And to do this you've got to skip a string or two.

STRING SKIPPING AND SCALES

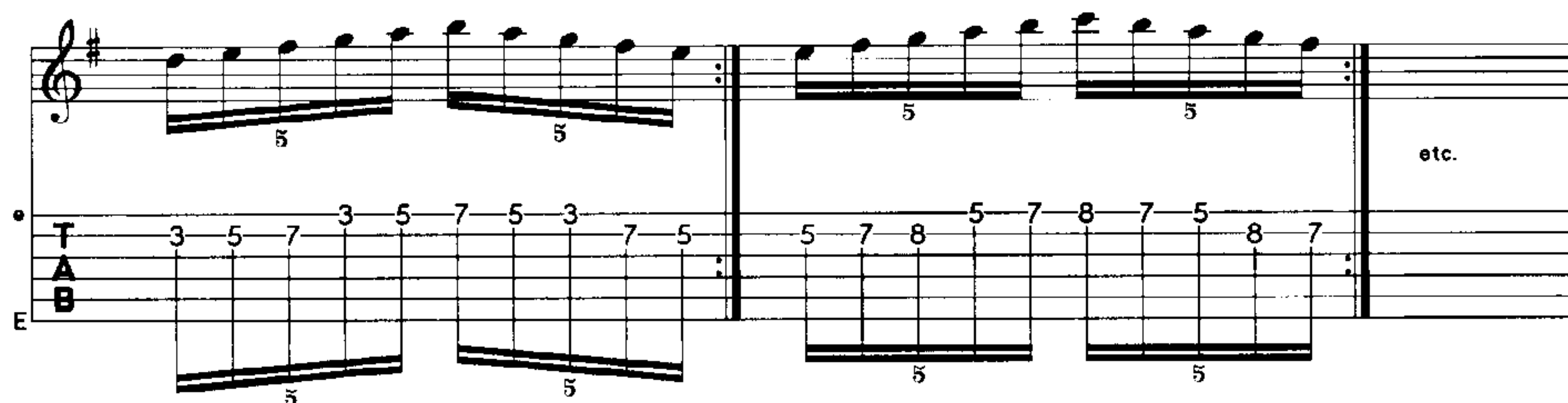
So how do you break out of the old scale positions and licks? By string skipping!

In addition to tapping, maestro **van Halen** had a few other licks up his sleeve back in 1978. Among others, sextuplet groupings similar to this one:



Here is a quintuplet sequence that works well horizontally over the fingerboard.

Exercise 32



These licks should serve as a good springboard for the first string skipping exercise. In the runs above, only intervals of a second are used. No wide intervals yet. This changes drastically as soon as you go from the B and E strings to the G and E strings.

Exercise 33

Exercise 34

PROJECT:

- Play the sequences with the following string combinations:

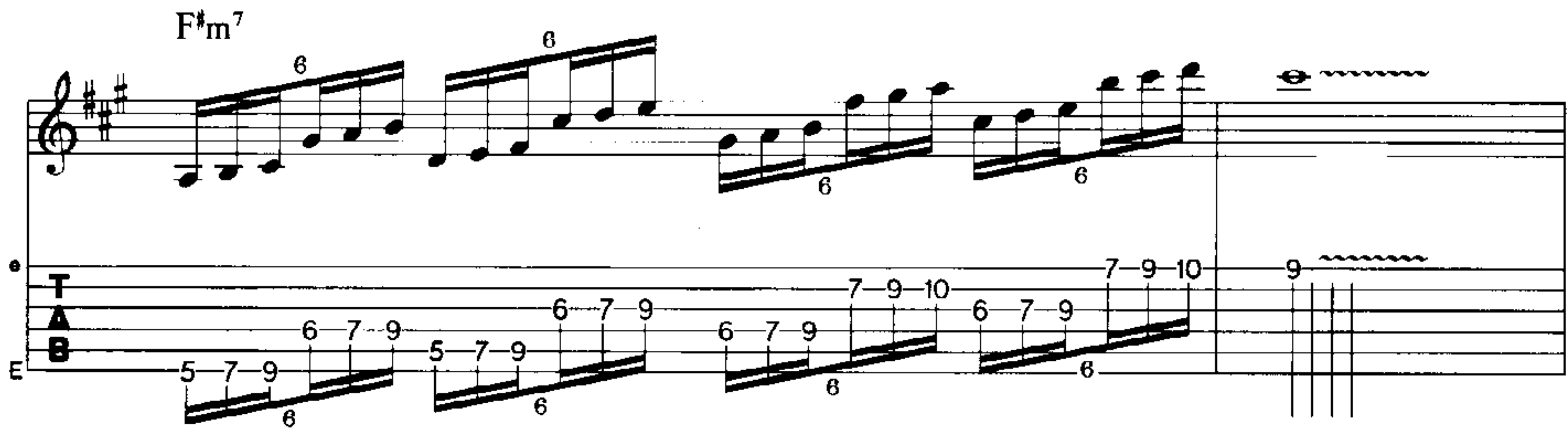
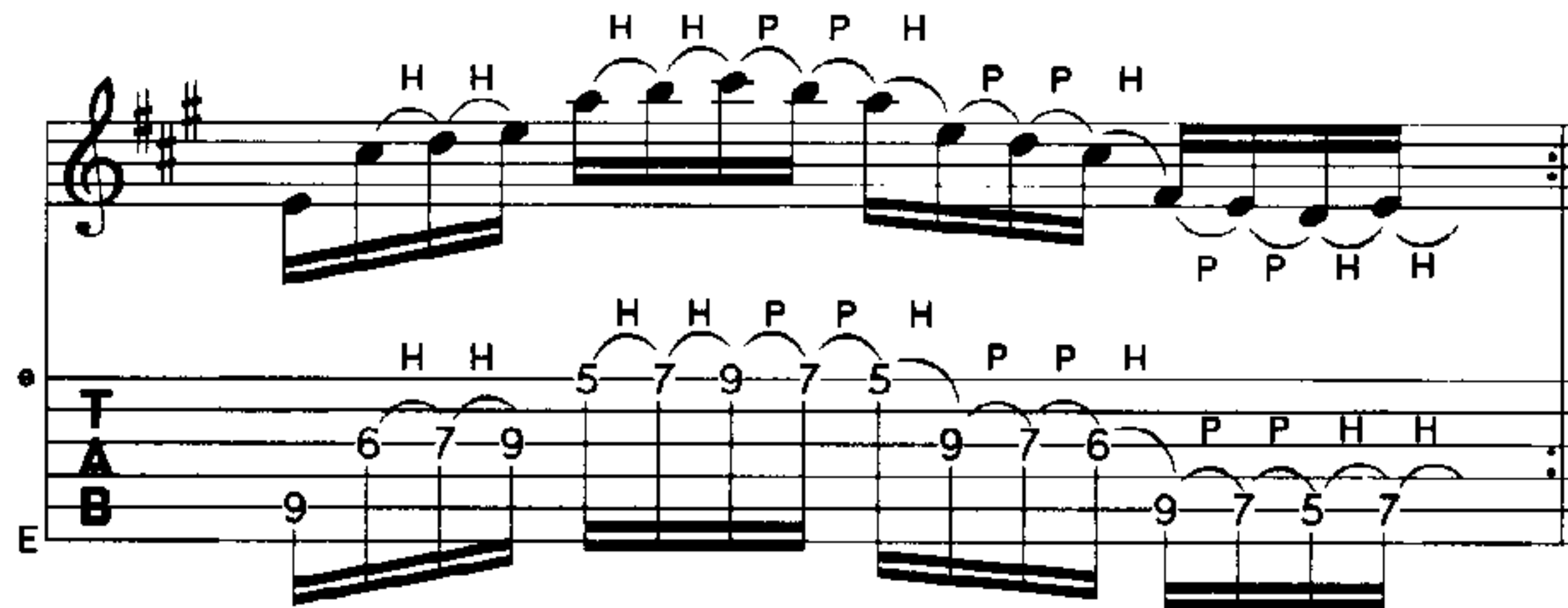
a) G + E b) D + E c) A + E d) E + E e) D + B f) A + B g) E + B

- Try picking every note, then try picking only when changing strings, playing the rest with hammer-ons and pull-offs.

Always make sure that you stay in the right scale position!

These licks are very strenuous for the left hand, so be careful and don't overdo things.

In both of the following licks, more strings are used. Here too: don't overplay!

Lick 45**31**
CD INDEX**Lick 46****31**
CD INDEX**PROJECT:**

- The pentatonic scales can also be played in this way.
All you have to do is combine two neighboring scale positions, as in tapping.

You can probably guess what's coming next:

STRING SKIPPING AND ARPEGGIOS

A lot of guitarists have the unfortunate tendency to simply run arpeggios up and down the neck. An effect which is reinforced by sweeping by the way.

String skipping, though, enables you to play arpeggios easily in rhythmically interesting sequences.

By playing only the outer notes in lick 45, you'll come up with a major arp. Normally it would probably be played a bit differently:

With this new way of fingering you can easily play licks that used to be reserved for keyboard players only. Here are a couple of sequences to try out:

Exercise 36

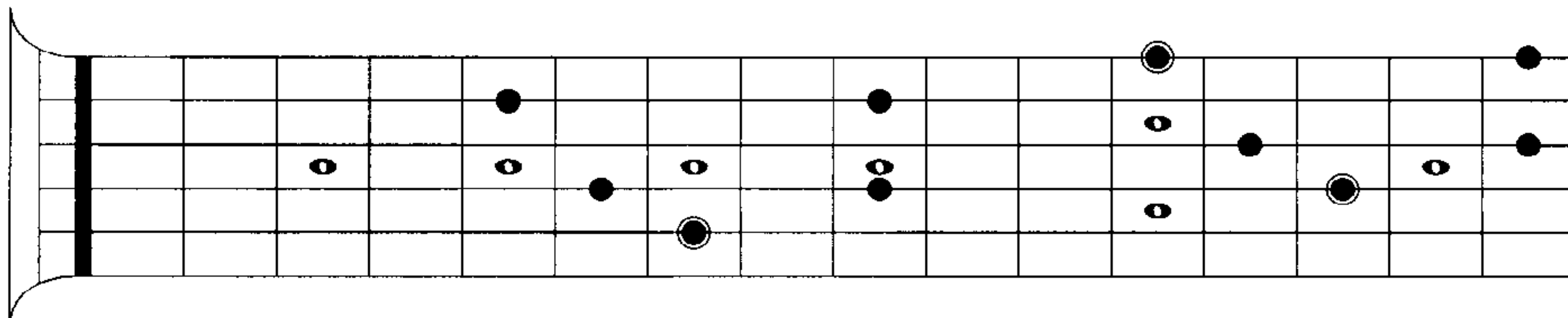
[illegible]

Exercise 37

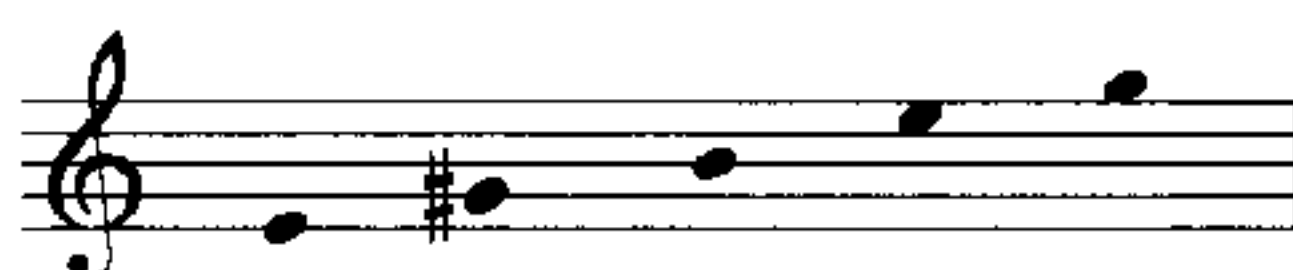
Exercise 38

Of course the minor and diminished arpeggios can also be played like this. Now check out these finger positions:

E major arp

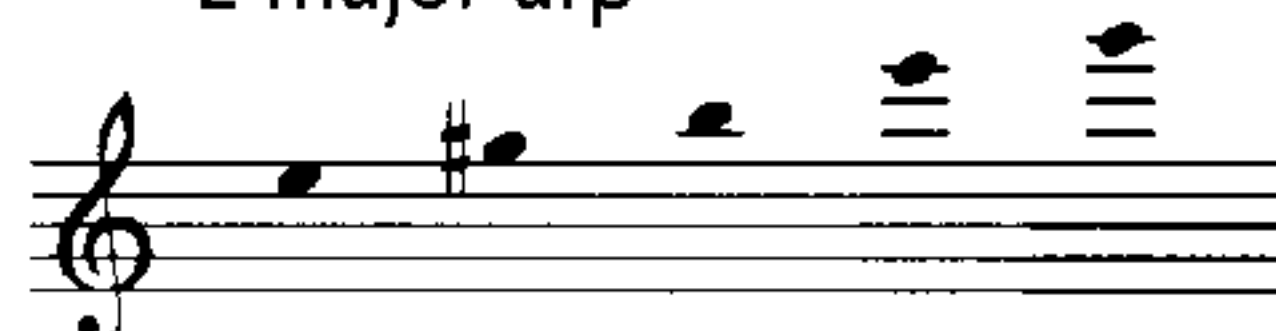


E major arp



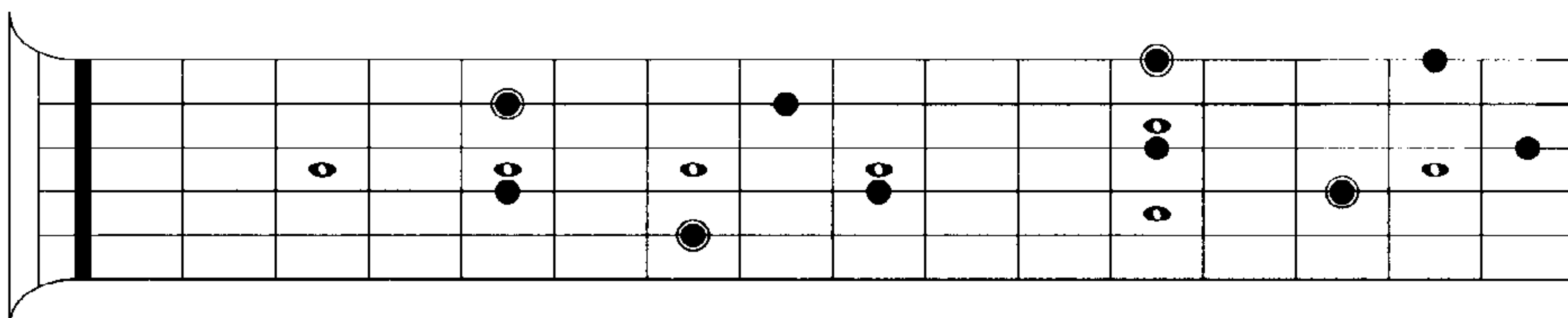
root note on the A string

E major arp

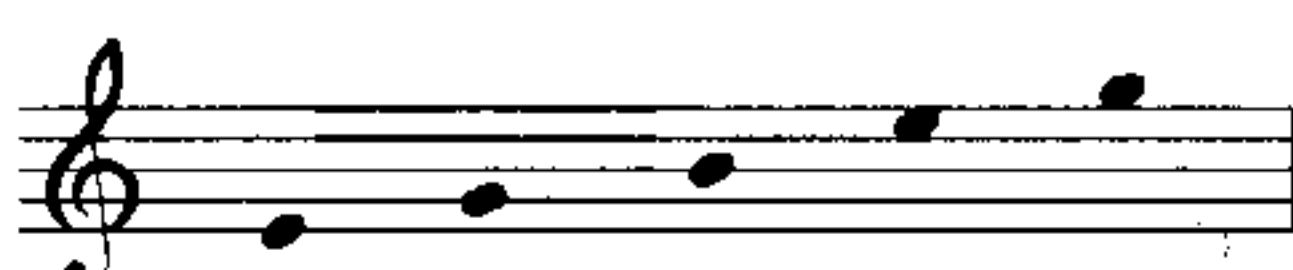


root note on the D string

E minor arp



Em arp



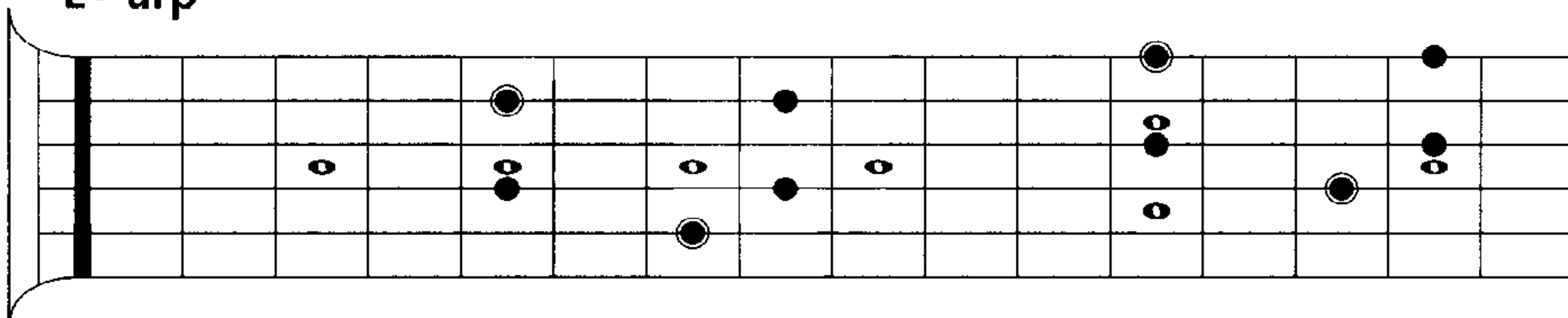
root note on the A string

Em arp



root note on the D string

E^o arp



E^o arp



root note on the A string

E^o arp



root note on the D string

Notice that the fingering positions for these arps are identical, although they lie on different sets of strings.

Here I've written out a chord progression with the new arps.

Exercise 39

31
CD INDEX

E
8va

B
simile

A

Am

C

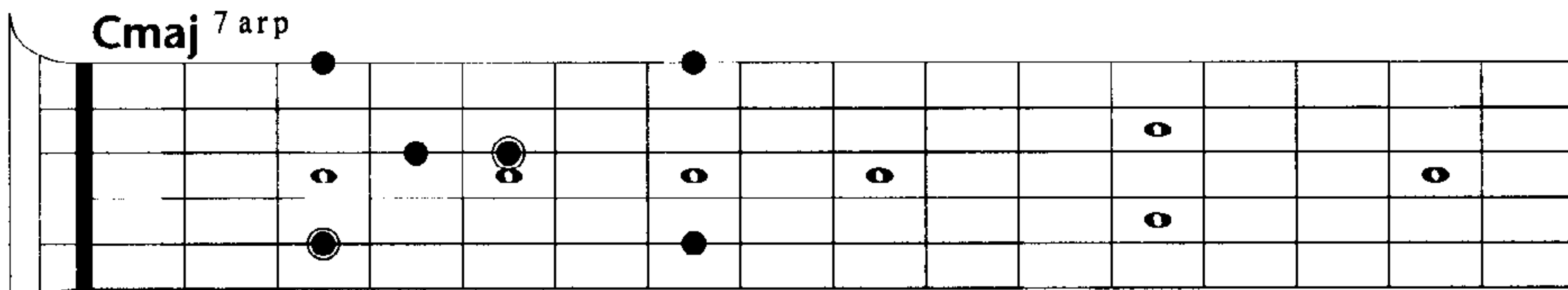
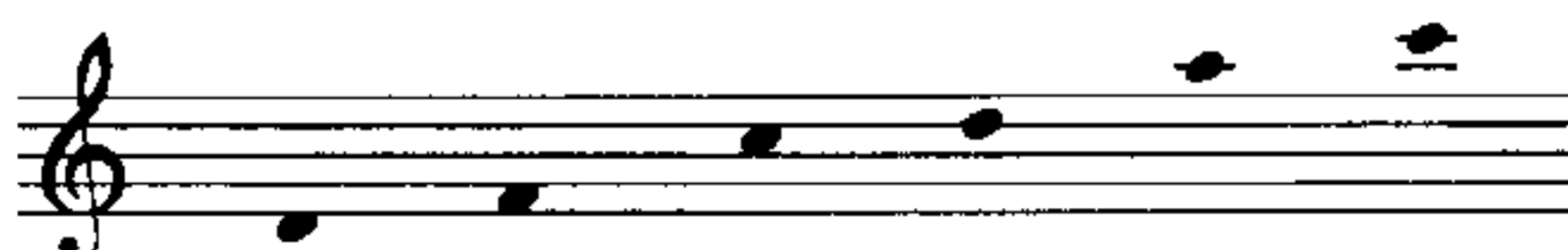
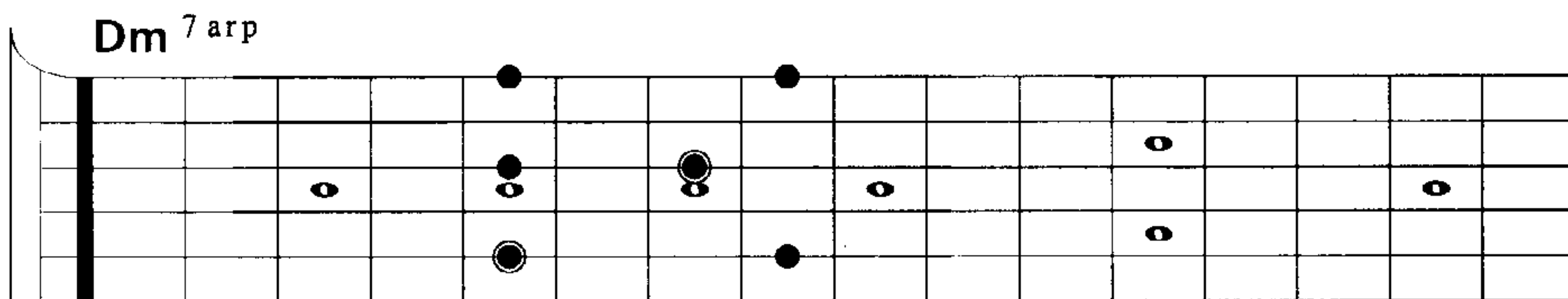
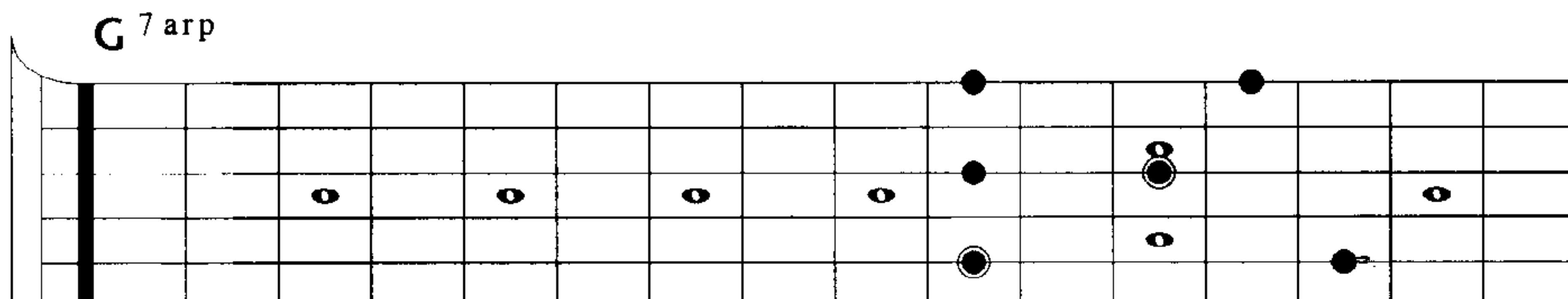
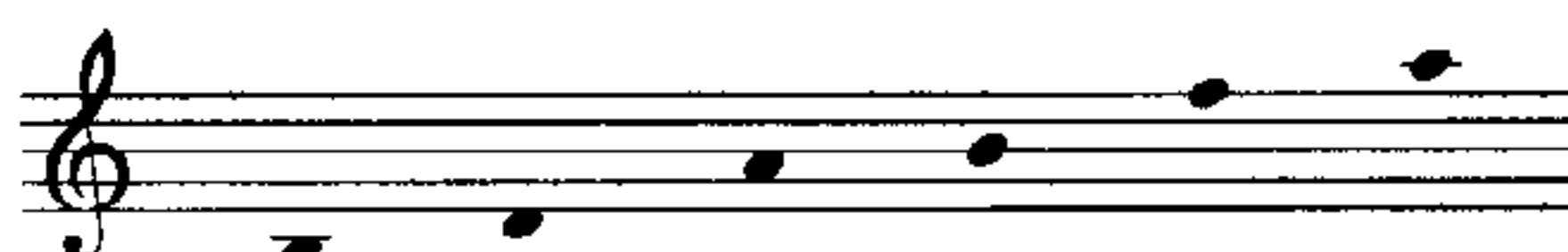
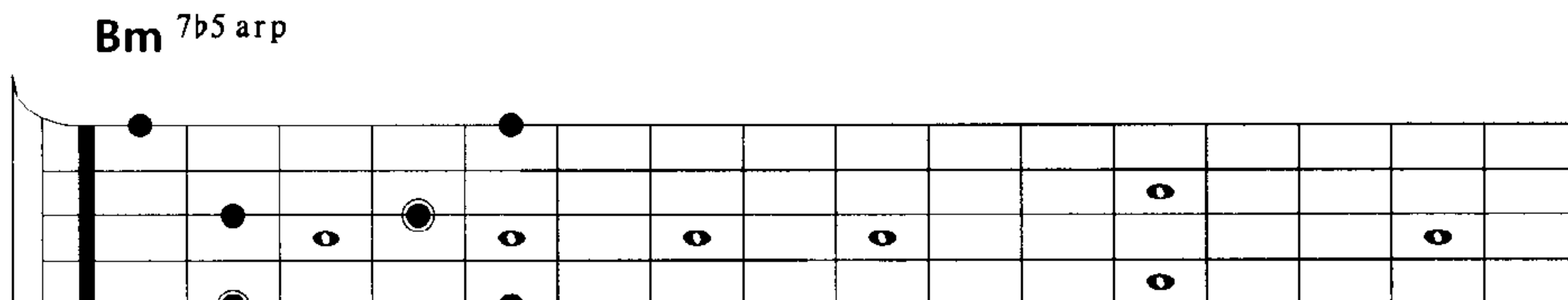
D
simile

E

Tablature strings: T, A, B

Fingerings: 12-16-12, 12, 16-13-16-13, 14, 13-16, 12-16-12, 16, 12-16-12, 12, 12-16-12, 12, 10-14-10, 10, 10-14-10, 10-13-10, 10, 10-13-10, 14, 14-11-14, 11, 12, 11-14, 14, 10-14-10, 10, 14-10-14-10, 12, 10-14, 14, 12-8, 8, P, P, 12-8-10-8, 12-10, 14-10, 10, 14-10-12-10, 14-11, 12, 14-11, 14-12, 16-12-12, 16-12-14-12, 13, 16, 16-13, 14, 16-13, 16-14, 13, 14, 13, 14, 14

Four-note arpeggios are also easy to play with string skipping. They have a very wide, open sound and sound very saxophone-like. What's interesting about these fingering positions is that they each have only two notes per string, just like the pentatonic scales. As was the case with the three-note arps, the fingering positions of these arps also stay the same when the root note is fingered on the E string.

Cmaj⁷ arp**Dm⁷ arp****G⁷ arp****Bm^{7b5} arp**

Here is a pentatonic repeating pattern. The next lick is exactly the same pattern played with string skip arps. Played at the right speed, this lick sounds really spectacular, although it's really quite simple.

Lick 47

31
CD-INDEX

Am⁷

Lick 48

31
CD-INDEX

Dm⁷

Amazing, huh?

Here's another lick with four-note arps.

Lick 49

31
CD-INDEX

CΔ⁷

Here are a couple of killer licks :

These sequences are similar to the ones from the legato chapter.

Lick 50

31
CD-INDEX

Em⁷
8va

Lick 51

31
CD-INDEX

E⁷
8va

Lick 52

31
CD-INDEX

A⁷
8va

Lick 53

31
CD-INDEX

E
8va

As in every chapter, the only limits set here are those set by your own imagination, so experiment around with these new concepts and fingering positions and invent your own licks with the string-skipping technique .

Chapter 13

TWO-HAND TAPPING

Tapping scales and arps

Eight-finger tapping

Harmonic tapping

Two-hand tapping means producing notes by hammering on the fingerboard with the fingers of the right hand. This makes the sound more fluid and legato-like and enables you to play fast and with wide interval skips with little effort.

This technique was made popular by **Eddie van Halen** in the late 70's and is, along with string bending, the most typical electric guitar playing technique.

After **van Halen**, tapping was used by almost every rock guitarist at one time or another. Of particular note, though, are the further developments of this technique by musicians like **Steve Lynch**, **Jeff Watson**, **Jennifer Batten** and **Stanley Jordan**.



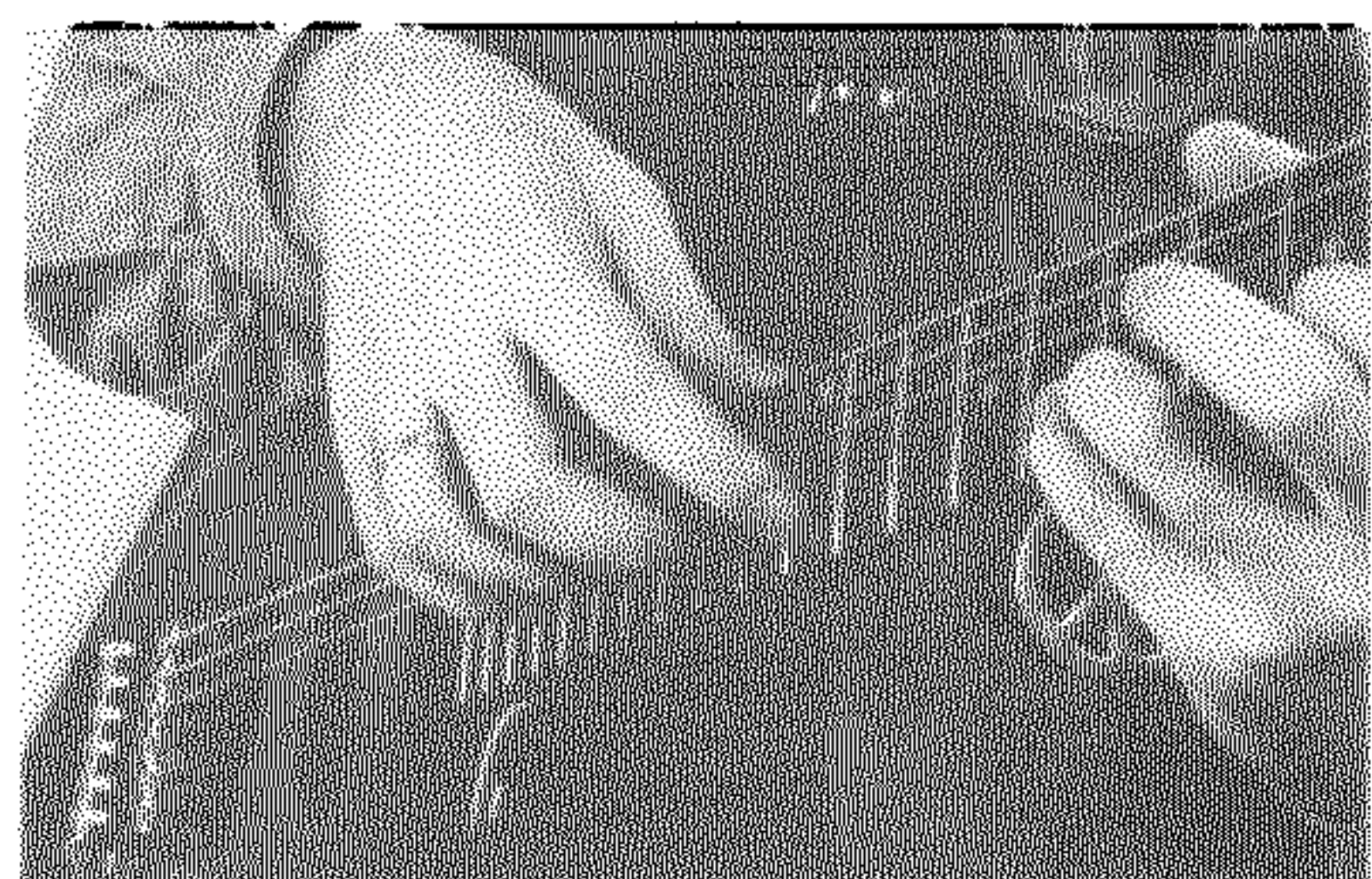
With tapping, there are a few things to keep in mind:

Rule number one:

Burn your pick, or at least glue it to your forehead with saliva like **Jennifer Batten** does.

Rule number two:

Find a point on the top edge of the upper fingerboard where you can rest your thumb. If you want to tap with your middle finger only, find a resting point for the ball of your hand. The ideal angle of the right hand is 45 degrees.



Rule number three:

Whether you pull up or down with the right hand is relatively unimportant. I prefer an inward motion of the hand (similar to regular left hand pull-off's ...**Jennifer Batten** plays this way...). Pull-offs in a downward direction can also be highly effective, as, for example, **Steve Lynch** proves. The main thing here is that the tapping motion should come from the fingers instead of the wrist or the forearm.



Low action, thin strings and high frets make tapping much easier. To get rid of unwanted string noise, I'd recommend using a **handkerchief** or a **sock** at the first fret for muting.

Here's an easy initial exercise for working on the tapping motion. Play it on all strings and with all the fingers of the right hand. Also try out different combinations of frets. And try to keep your timing constant while tapping with the fingers, which you don't usually tap with.

Exercise 40

The next step is to add another note in the left hand. Now you'll find yourself playing the notorious van Halen triplet.

Exercise 41

As it wasn't known back then how exactly Master van Halen played this lick, several variations cropped up, all of which sound pretty interesting:

Exercise 42

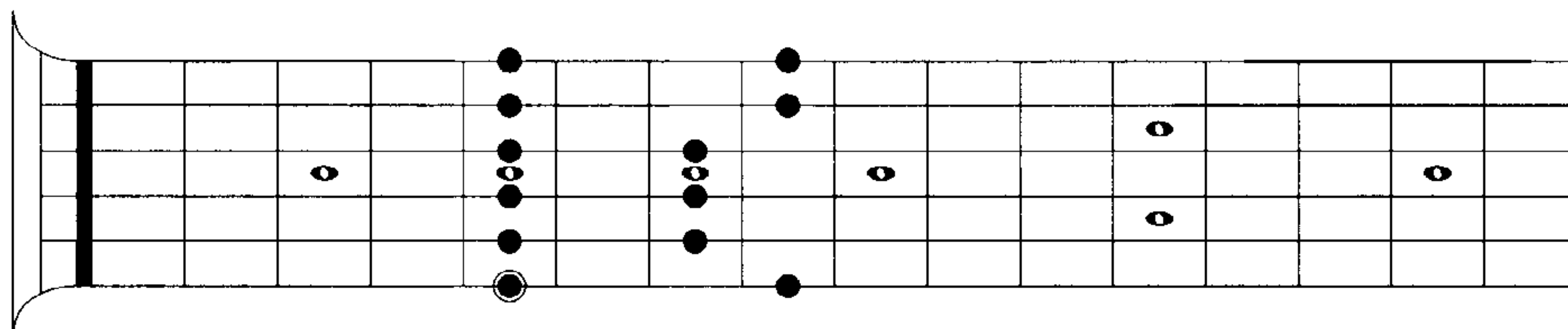
The following exercise changes the right hand notes as well as those of the left hand. Play it with the variations above as well.

Exercise 43

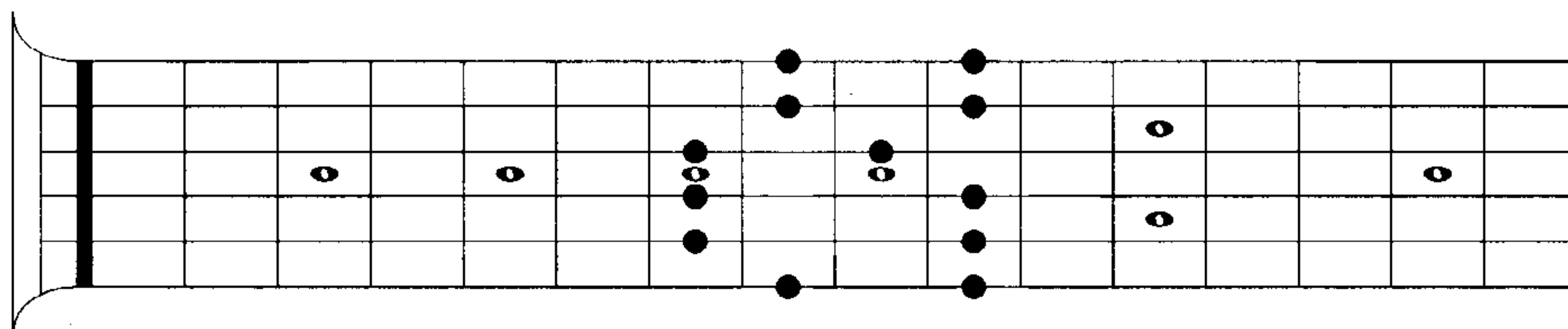
TWO-HAND SCALES

A good way of organizing this material for use in improvisation is to combine two adjacent pentatonic scales, tapping the highest note on each string with the right hand.

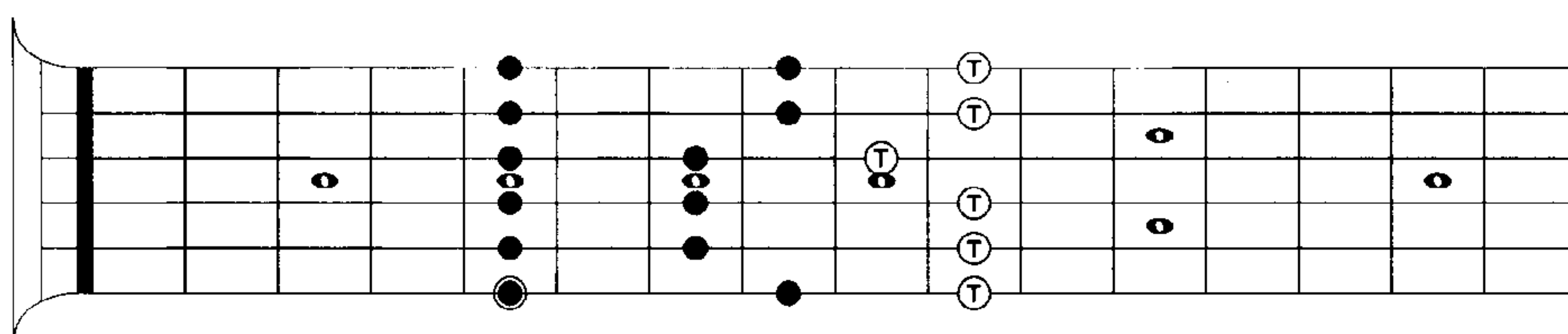
Am pentatonic pattern 3



Am pentatonic pattern 4



Pattern 3 and 4 combined



PROJECT:

- Combine the remaining pentatonic positions with each other.

This concept enables you to easily play runs that would be almost impossible to play conventionally (without tapping). Experiment with these sequences:

Exercise 44

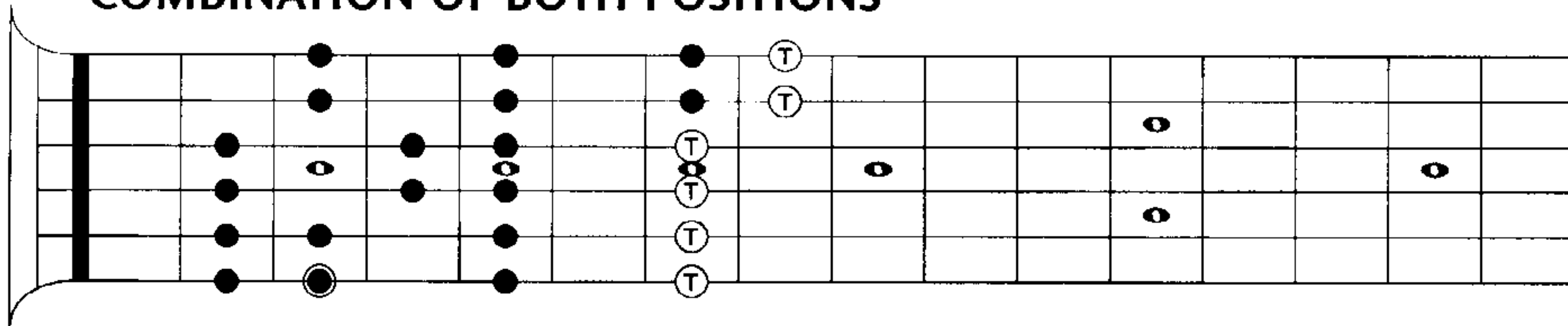
Exercise 45

The concept of combining two scale positions into a single tapping scale, of course, works with the major scale as well. Here again, the **three-notes-per-string scale** fingerings are best. In the following example I've combined finger positions for F# locrian and G ionian. By the way, this technique can be used to play licks a la **Reb Beach** (Winger).

F#-locrian

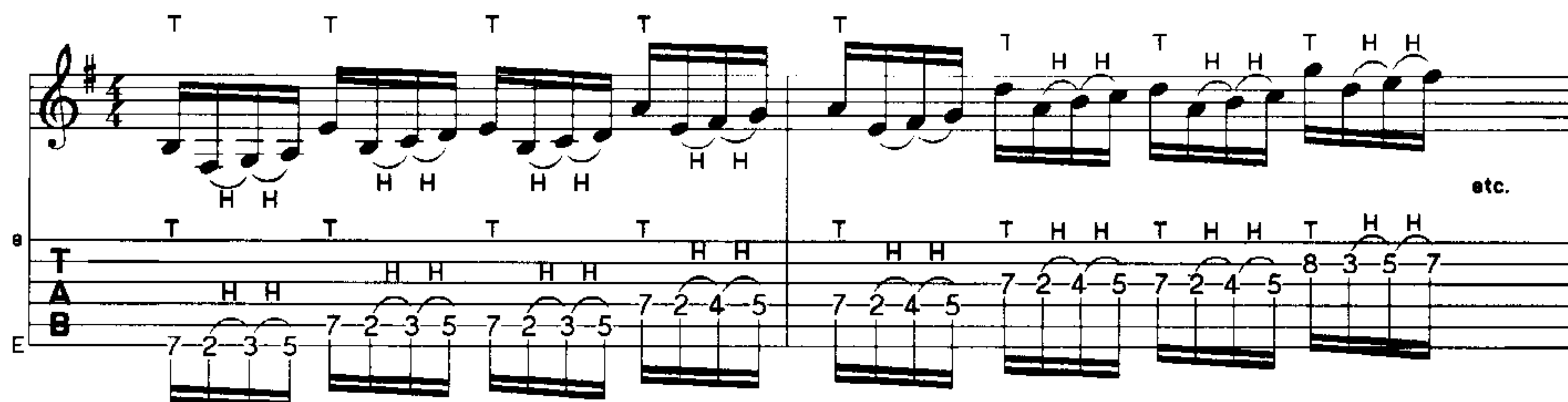
G-ionian

COMBINATION OF BOTH POSITIONS



Here is a two-handed run taken from a picking sequence from chapter 6 (Exercise 15, pg. 52).

Exercise 46

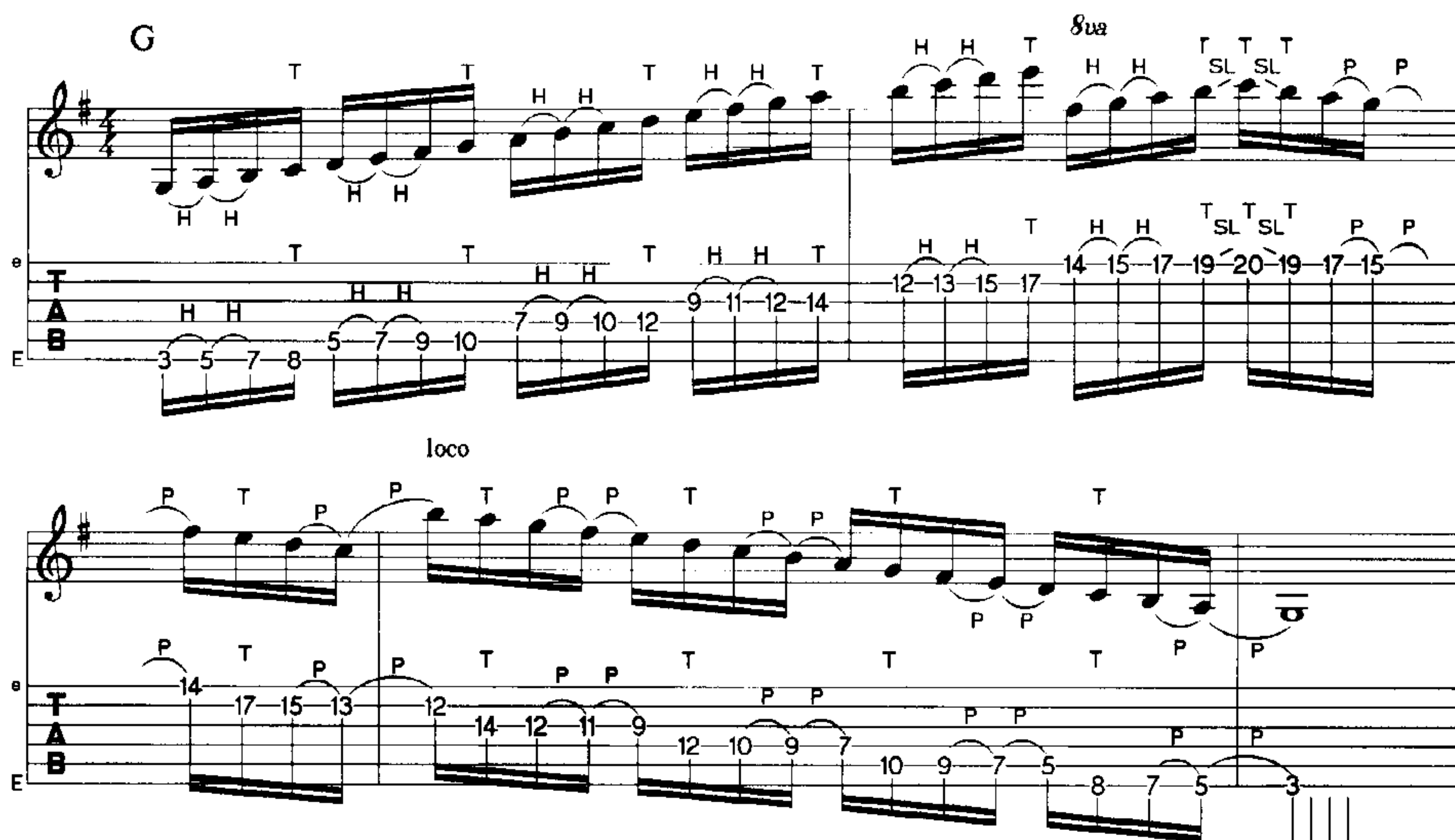


PROJECT:

- Combine the other scale positions with each other.
- Do the same with the harmonic minor scale.
- Use the aforementioned pentatonic scale sequences with the major scale.

Here is another way of playing a major scale with two-hand tapping. This time without doubled notes.

Exercise 47



Before we get to tapping with all the fingers of the right hand, here are a few more good sounding licks:

Lick 56

32
CD-INDEX

A⁷

Lick 57

32
CD-INDEX

G

CD INDEX

CD-INDEX

Am7

T SLT SLT T T T T

T SLT SLT T SL T T T

5 8 12 13 12 8 5 8 13 12 8 5 7 10 9 7 5 7 10 7 7

T A B

CD INDEX

EIGHT-FINGER TAPPING

So, now it's time to finally get the other right hand fingers into the tapping act. If they feel pretty weak and helpless at first, don't worry ... that's perfectly normal. The little finger is particularly difficult to use, isn't it? But can you remember how clumsy your left hand fingers felt as you began to play guitar?

As a first step towards building up strength, you should go back to the very first exercise in this chapter (Exercise 40, pg. 121), this time using all the fingers of the right hand.

Here is another exercise using all the fingers of the right hand

Exercise 48

DOUBLE PENTATONICS

A concept often used by Jennifer Batten and Steve Lynch is double pentatonics. Here, the finger position of a particular pentatonic is doubled a fourth, fifth or octave higher, and the notes of both patterns are played alternately. In the next example we'll see that this is much easier than it sounds:

Exercise 49

This idea can be used to build any lick into a two-handed one, as in the following example:

Lick 62**32**
CD-INDEX

Dm⁷

With these licks, use the same fingering positions for the right hand as for the left.

PROJECT:

- Should you want to keep playing purely pentatonic, and not, as in the example above, combine it with all the notes out of the major scale, you can also combine two pentatonic scale patterns, for example with the left hand pattern 3 and with the right hand pattern 5 (pg. 19).

Whereas with most of the licks up to now you've always alternately played the tapped and normally-fretted notes, the next step is to play all notes on every string successively. Here are the pentatonic scale and the blues scale with this concept in D.

Dm pentatonic
Blues scale in D

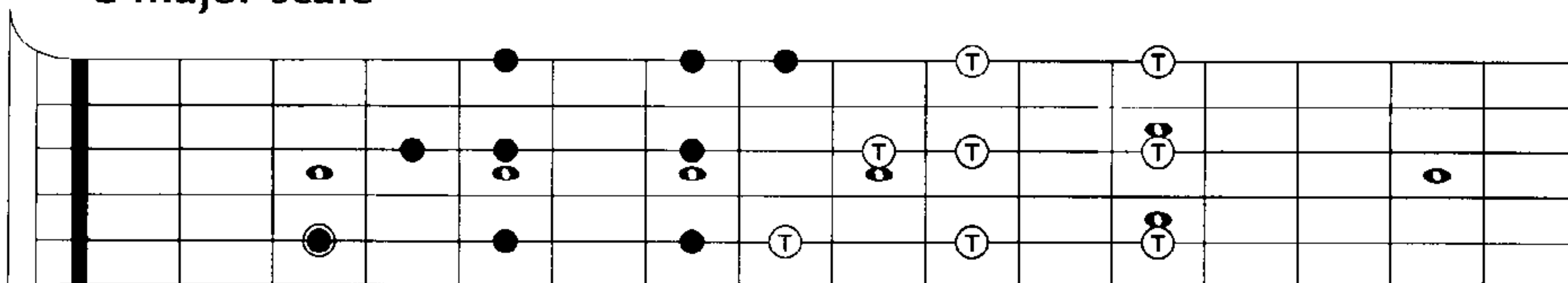
Pretty hard, eh?

EIGHT-FINGER SCALES

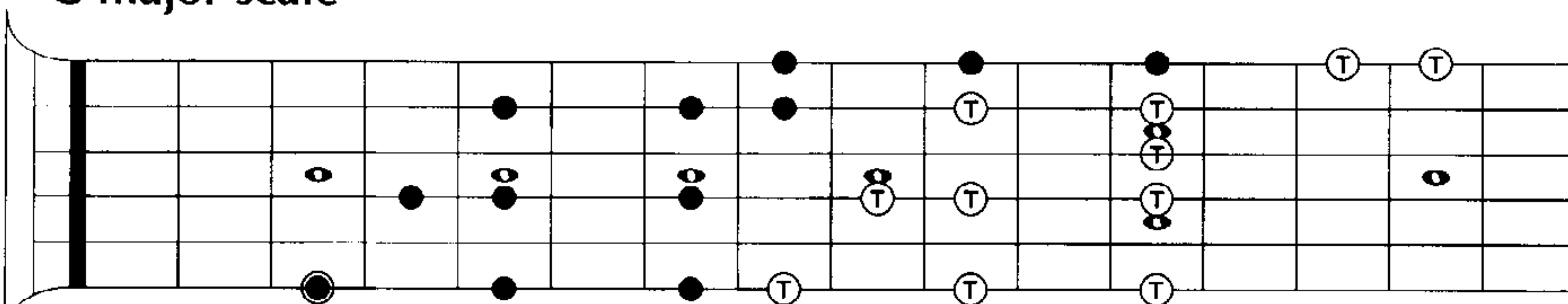
This concept can of course also be applied to other scales such as the major scale or the harmonic minor (see chapter 14, pg. 137).

Note: As I began to work on these licks and concepts I was on the verge of despair because of the amount of work and discipline required. So give yourself right from the start lots of time to master these techniques. Set a **long-term goal**.

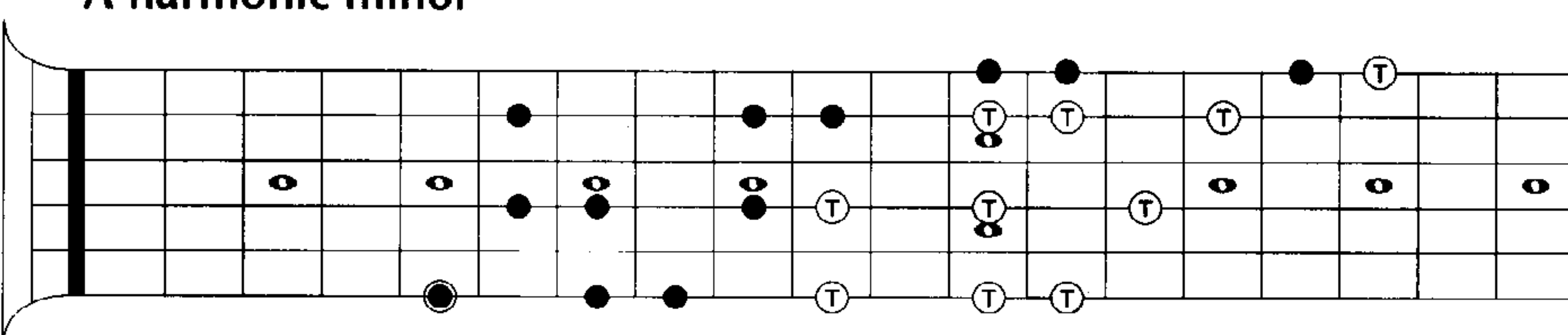
C-major scale



G-major scale



A harmonic minor



PROJECT:

- For the hardcore two-hand monsters:
How about scale sequences in 3 and 4-note groupings?

Discouraged already? Don't give up!

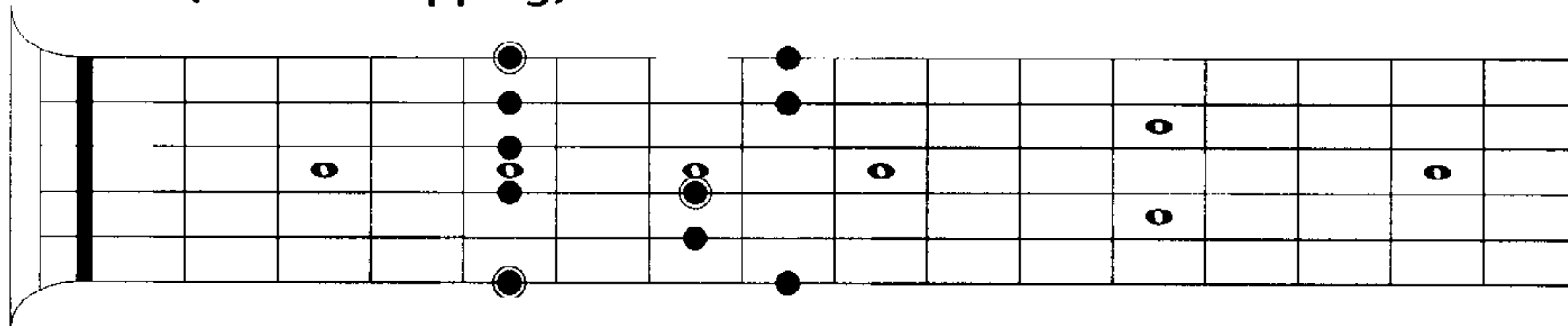
TWO-HAND ARPEGGIOS

As with "normal" improvisation, there's of course more to life than just scales. You can probably imagine what's coming up next ...

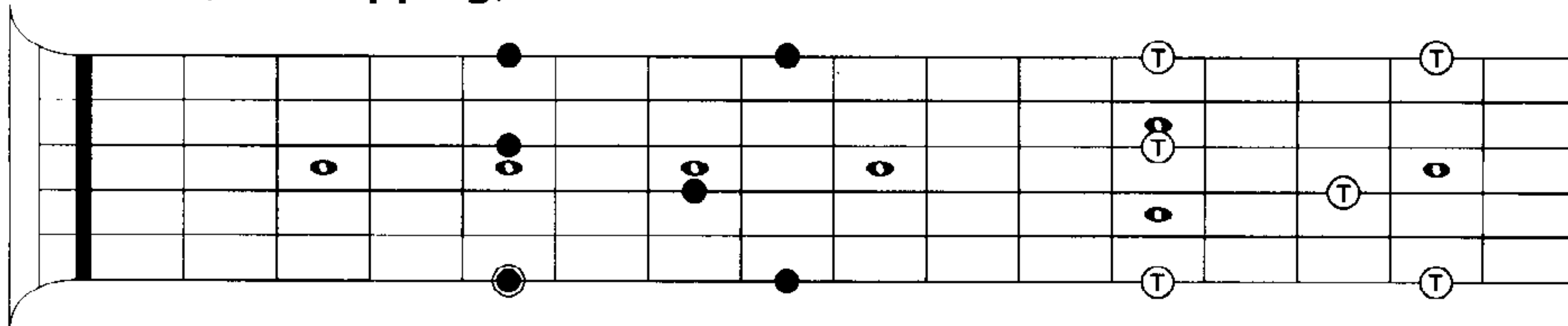
That's right! ... Arpeggios. In comparison to the scales we've just worked on, we're now going to take a step downward on the difficulty scale. The trick here is to divide up the notes of the arpeggios between two hands.

Here is the Am⁷ arp played with this technique:

Am⁷ arp (without tapping)

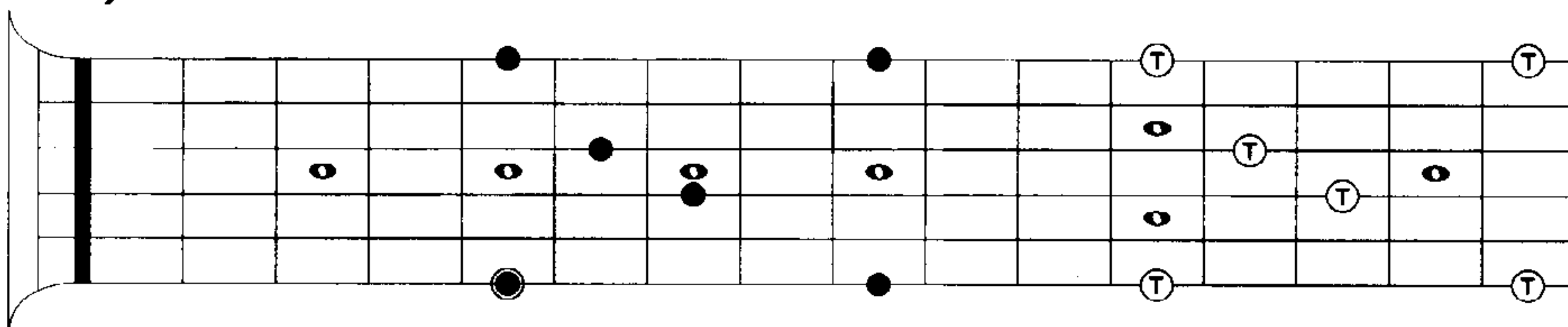


Am⁷ arp (with tapping)



If you now raise the two thirds in this pattern you get an Amaj⁷ arp.

Amaj⁷ arp

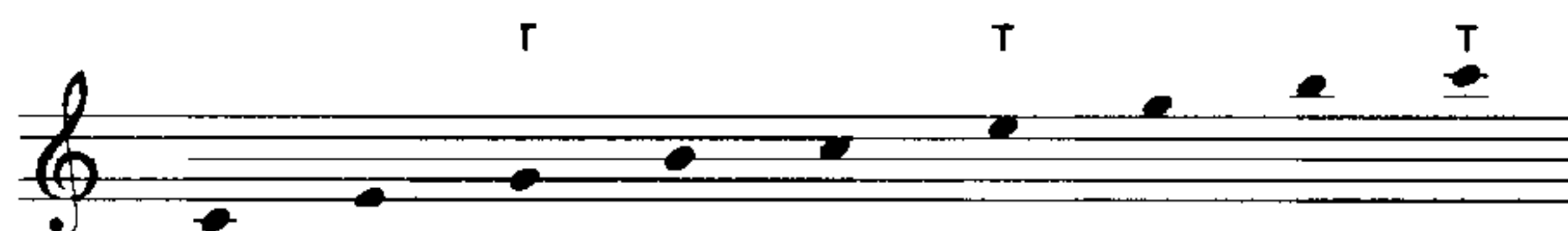
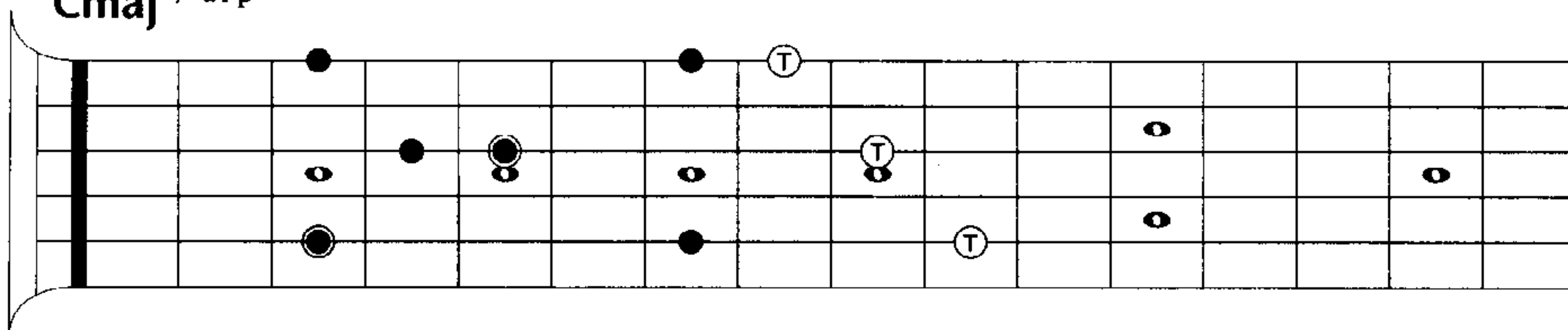


If you combine all of these fingering positions (major and minor) you can play every imaginable arp with two hands. Here's a chart showing the different combinations.

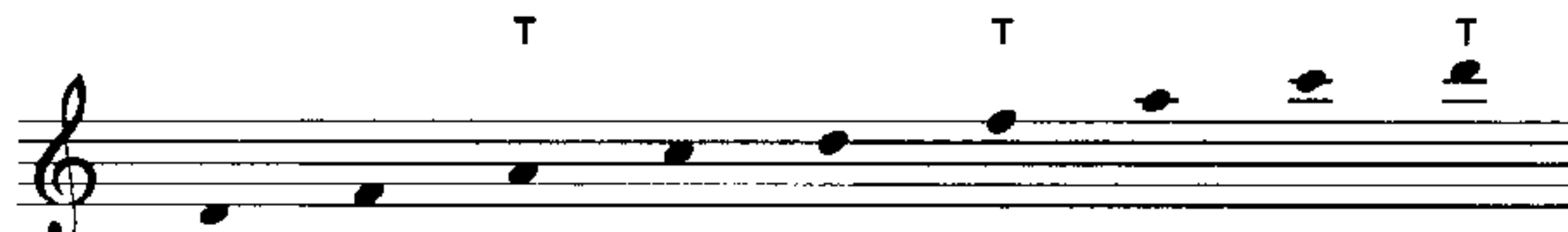
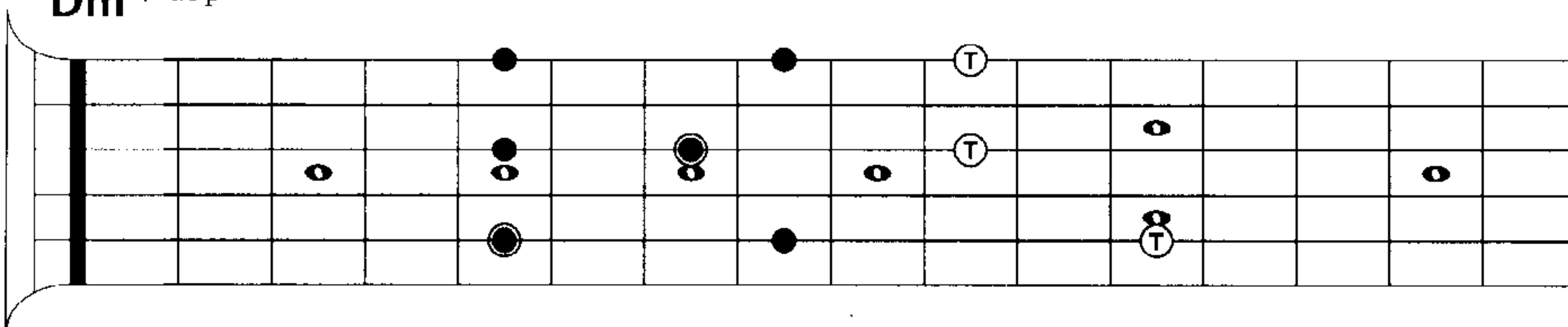
Arp	left	right	interval
Am ⁷	minor	minor	+ fifth
Amj ⁷	major	major	+ fifth
A ⁷	major	minor	+ fifth
Am ^{7b5}	minor	major	+ dim. fifth
A ^{dim7}	minor	minor	+ dim fifth
A ^{aug}	major	major	+ aug. fifth

Remember the four-note arps in the string-skipping section? They can also be extended to two-hand arpeggios.

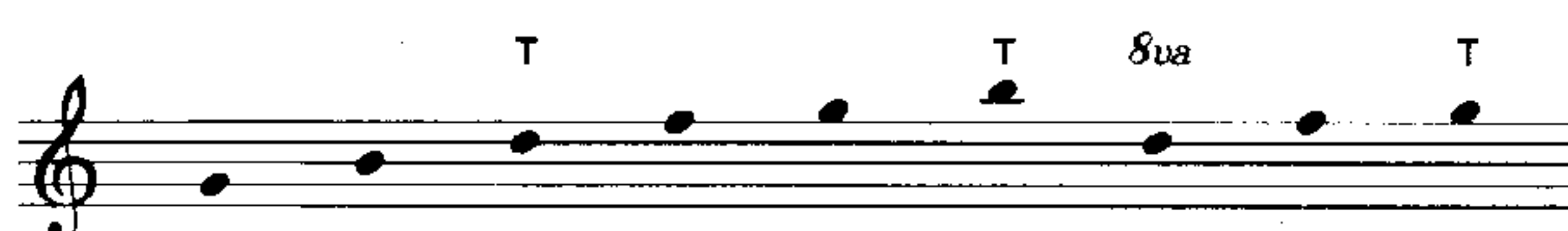
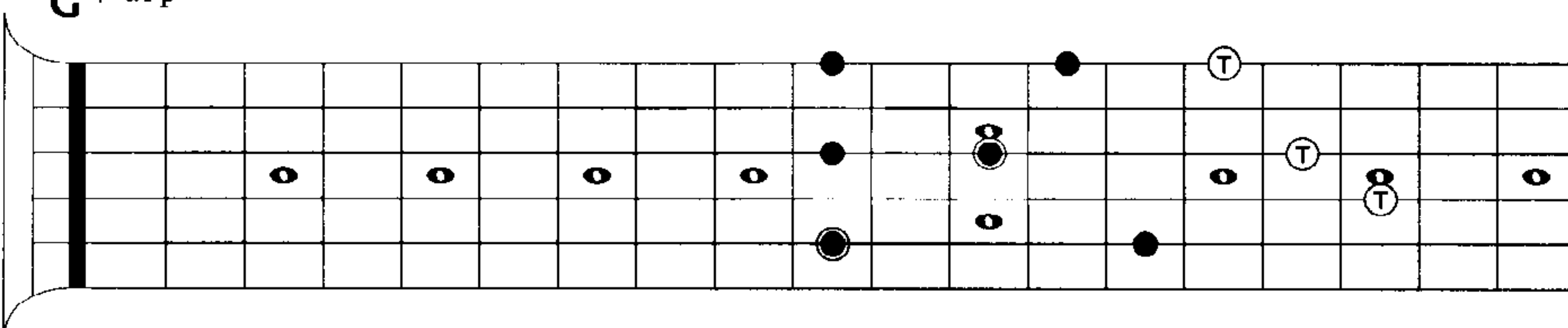
Cmaj⁷ arp



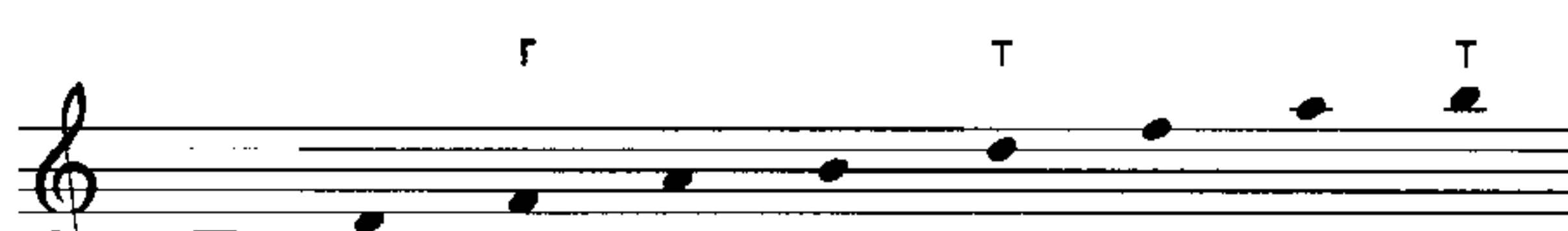
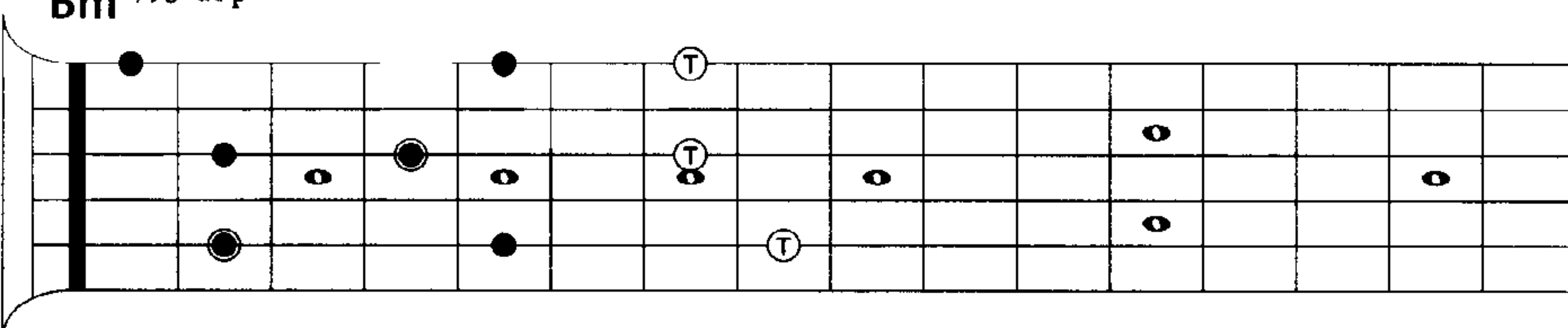
Dm⁷ arp



G⁷ arp

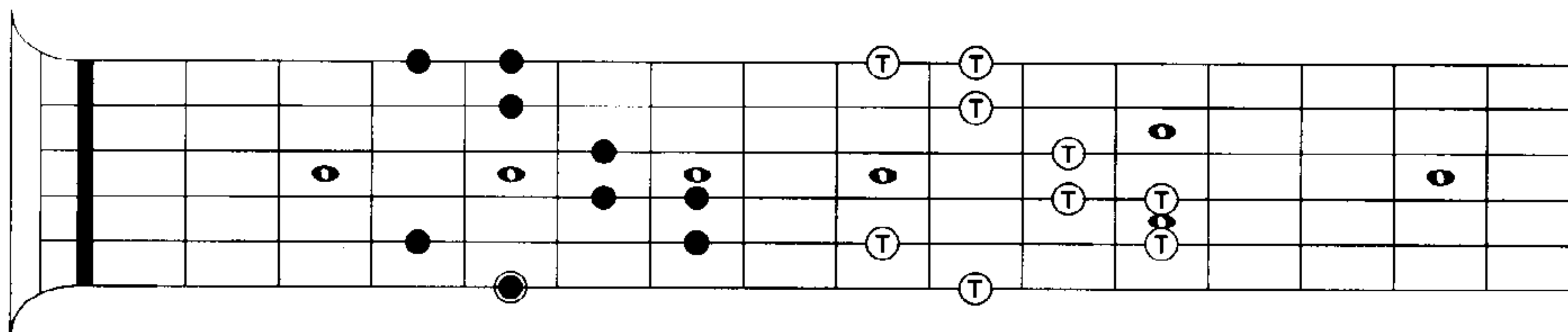


Bm^{7b5} arp



DOUBLE ARPEGGIOS

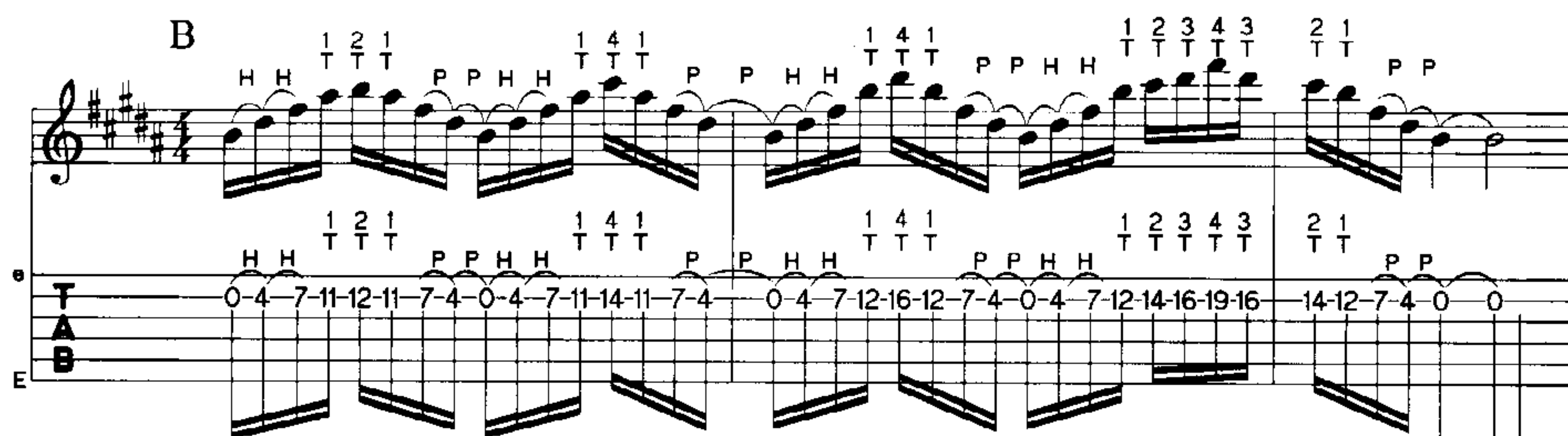
Double arpeggios are constructed similarly to double pentatonics:



All these licks and concepts have one thing in common: they are all more or less vertically arranged. i.e. they use a number of strings and stay mostly in one position.

Guitarist **Jeff Watson** (Night Ranger) used the arpeggiated triads approach a la **van Halen** to develop further the horizontal way of playing (lengthwise along a string), in which he plays with all fingers on one string (see exercise 48).

Lick 63

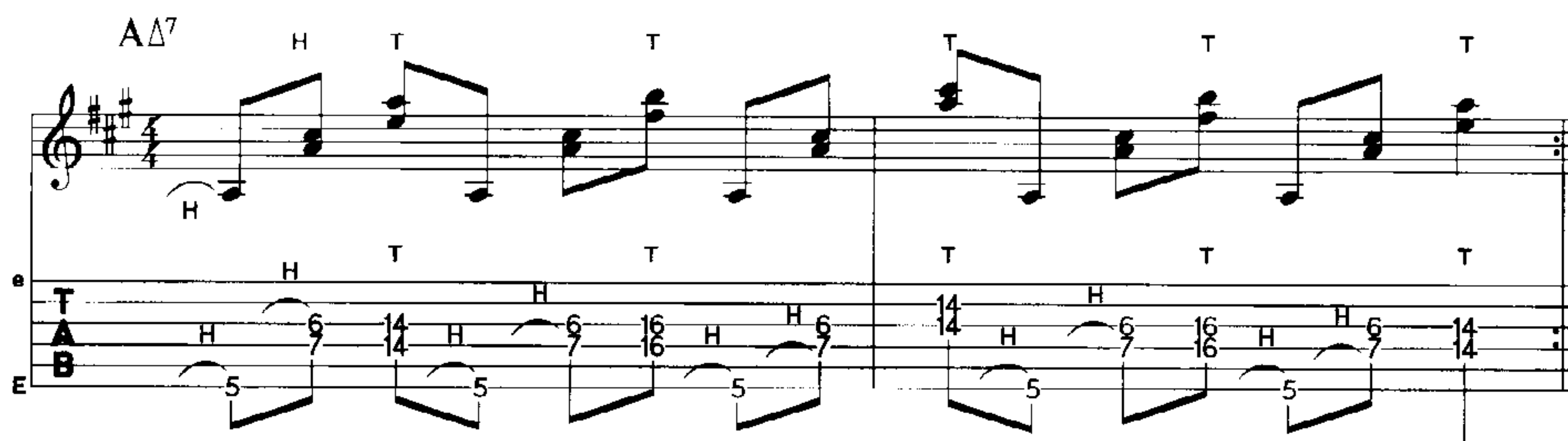


TWO-HAND CHORDS

Whereas all these techniques and concepts are primarily solo ideas, guitarists like **Joe Satriani**, **Steve Vai** and **Allan Holdsworth** have used tapping in their rhythm playing.

Either as a rhythm pattern:

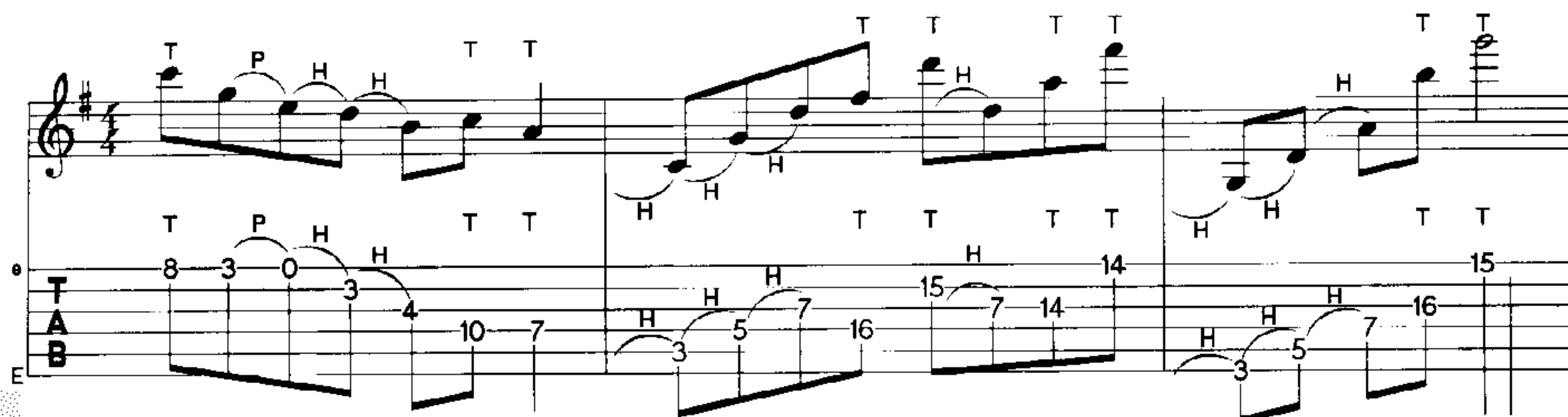
Lick 64



... or as a chord extension:

Lick 65

32
CD-INDEX



HARMONIC TAPPING

No chapter on two-hand tapping would be complete without discussing tapped harmonics.

This technique, too, was made popular in the late 70's by Master **van Halen**. In contrast to the "normal" tapping technique, here the note is not fretted with the right hand, instead it's hammered directly down on the fret, fast and hard, so that the harmonic sounds as loud as possible.



With this technique you can tap on frets at different distances and get a different harmonic every time. Here is a chart for it (for example on the G string)

Distance	Interval	Note	Scale step
12 frets	1 octave	G	1
9 frets	2 octaves + maj 3rd	B	3
7 frets	1 octave + 5th	D	5
5 frets	2 octaves	G	1
4 frets	2 octaves + maj 3rd	B	3
ca. 3 1/3 frets	2 octaves + 5th	D	5
ca. 2 2/3 frets	2 octaves + minor 7th	F	b7
ca. 2 1/3 frets	3 octaves	G	1

These are the harmonics that are produced when you mute lightly over, or tap directly on the fret. If you fret a note with your left hand, you add the number of the fret you finger (e.g. 3rd fret fingered + 12 = 15th fret harmonic).

Here are a couple of licks using this technique:

Lick 66

32
CD INDEX

Diagram for Lick 66, showing two measures of guitar notation. The first measure is labeled $A^{7\#11}$ and the second measure is labeled $F\Delta^7$. The notation includes a treble clef, a 4/4 time signature, and a key signature of one sharp (F#). The guitar staff shows a sequence of notes and frets: 7-19, 6-18, 4-16, 0-12, 4-16, 6-18, 7-19, 3-15, 2-14, 1-13, 0-12, 1-13, 2-14, 3-15. The notes are marked with 'T' for tapping. The fret numbers are indicated by diamond shapes with the fret number inside. The diagram shows a sequence of notes and frets: 7-19, 6-18, 4-16, 0-12, 4-16, 6-18, 7-19, 3-15, 2-14, 1-13, 0-12, 1-13, 2-14, 3-15. The notes are marked with 'T' for tapping. The fret numbers are indicated by diamond shapes with the fret number inside.

Lick 67

32
CD INDEX

Diagram for Lick 67, showing two measures of guitar notation. The first measure is labeled BU and the second measure is labeled W/B . The notation includes a treble clef, a 4/4 time signature, and a key signature of one sharp (F#). The guitar staff shows a sequence of notes and frets: 5-(7), (7)-14, (7)-12, (6)-14, (6)-12, (5)-14, (5)-12, 3-12, (-x). The notes are marked with 'T' for tapping. The fret numbers are indicated by diamond shapes with the fret number inside. The diagram shows a sequence of notes and frets: 5-(7), (7)-14, (7)-12, (6)-14, (6)-12, (5)-14, (5)-12, 3-12, (-x). The notes are marked with 'T' for tapping. The fret numbers are indicated by diamond shapes with the fret number inside.

PROJECT:

As the above mentioned intervals are repeated on the other side of the 12th fret, you can:

- a) also tap the same notes there
- b) get the same notes by immediately muting lightly with the side of your right thumb.

TIP:

Further tapping licks can be found in my book "Masters of Rock Guitar", in the chapters on the following guitarists:

Eddie van Halen – Lick 2, 3, 4, 5 (pg. 95–96); Randy Rhoads – Lick 9, 11 (pg. 106–107);

Yngwie Malmsteen – Lick 8 (pg. 116); Steve Lukather – Lick 13 (pg. 131);

Joe Satriani – Lick 12 (pg. 139); Steve Vai – Lick 2, 3, 12 (pg. 143, 144, 147);

Paul Gilbert – Lick 6, 8, 9, 12, 14 (pg. 153–155).

Chapter 14

THE HARMONIC MINOR SCALE

Modes

Jam Tracks

Projects

OK, enough arpeggios and chord substitutions, here's a new scale: the **harmonic minor scale**. Neo-classical metal pioneers like **Yngwie Malmsteen**, **Vinnie Moore**, and others, introduced the harmonic minor scale and its "classical" tonal character (baroque, Bach-ish, to be exact) to rock music.

But how did this scale come to exist?

Let's compare these two chord progressions:

C	F	G ⁷	C
(I)	(IV)	(V)	(I)

The four-note chord G⁷ contains the leading tone of the C major scale - B. The leading tone always lies a half step below the root note of the tonic chord (I = C major). Together with the fourth, it's responsible for the tension and dissonance present in the G⁷, which disappears when you resolve back to C major.

Now let's look at the relative minor keys:

Am ⁷	Dm ⁷	Em ⁷	Am ⁷
(I)	(IV)	(V)	(I)

When you play this chord progression you can hear that the Em⁷ contains less tension and doesn't beg to be resolved. This is because the Em⁷ doesn't contain the leading tone (G[#]) to the tonic (A). Of course, to get this note into the chord you have to change the scale.

So natural minor becomes harmonic minor:

A-natural minor



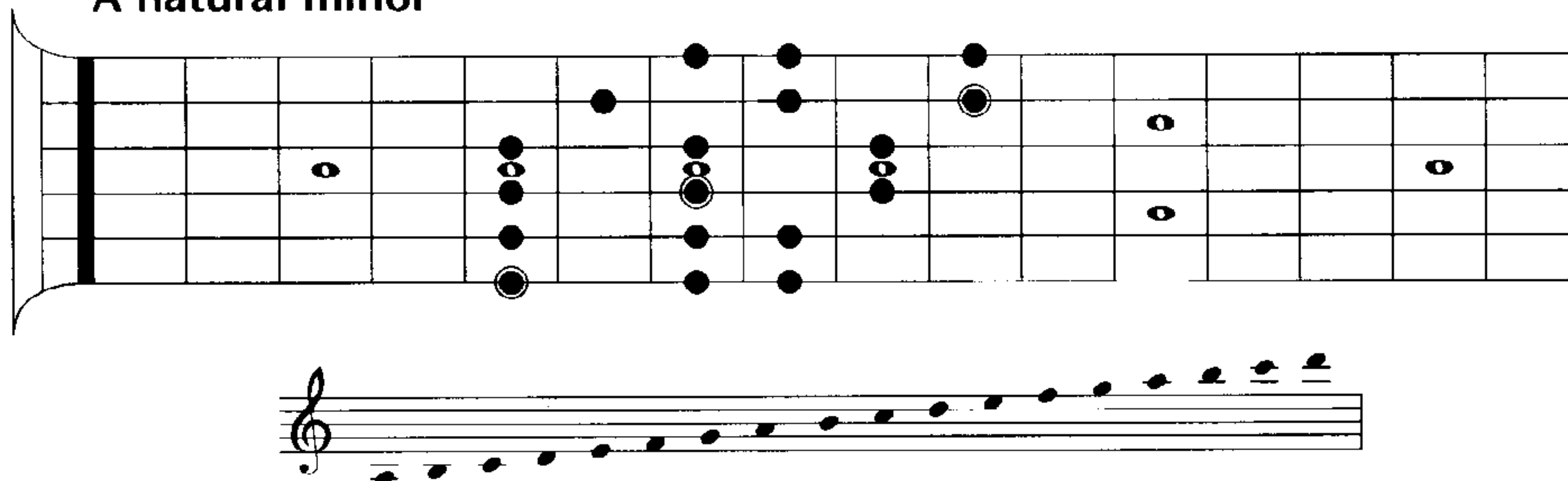
A-harmonic minor



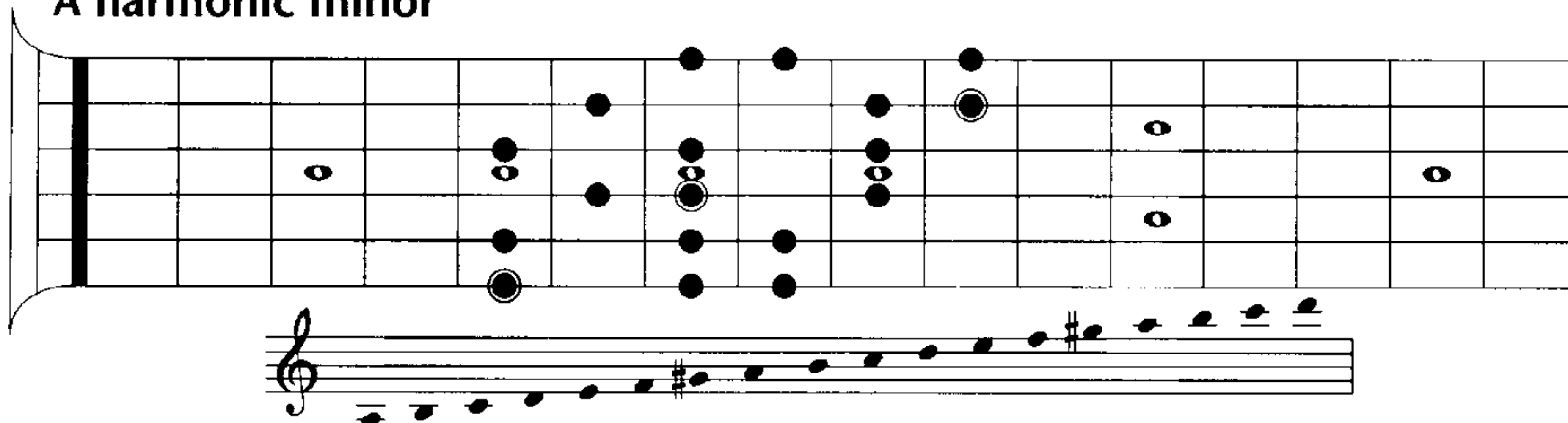
The only difference is the seventh (G - G[#]).

Here are both scales in three-notes-per-string form:

A natural minor



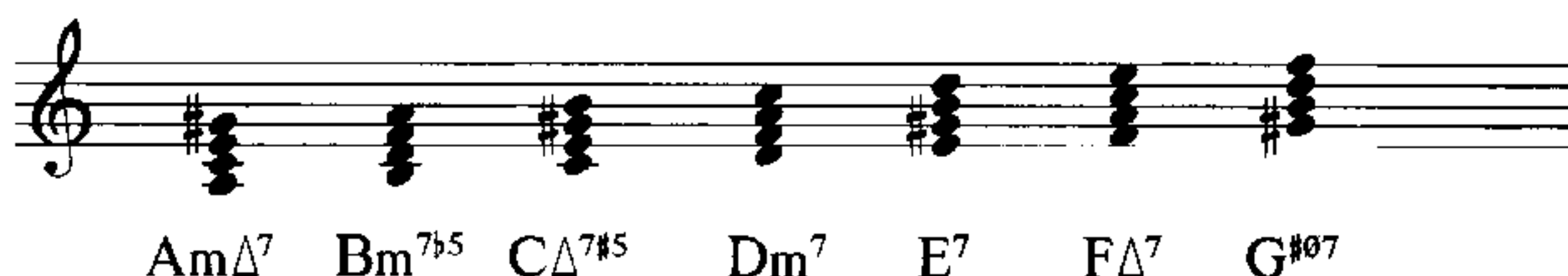
A harmonic minor



In the fingerboard illustration, too, only one note has changed, so try to learn just one new note instead of a complete new scale.

THE FIFTH MODE OF THE HARMONIC MINOR SCALE

Of course another system of diatonic chords emerges from this change:

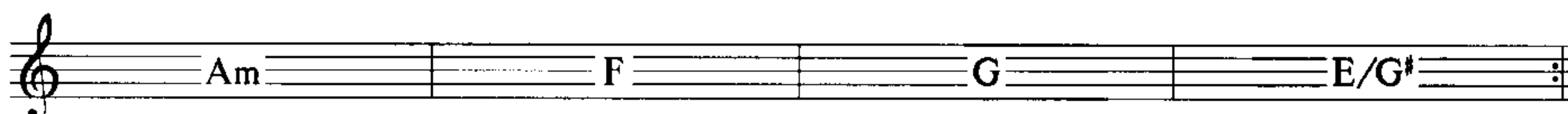


The E 7 chord now has enough "pull" to the Am 7 chord.

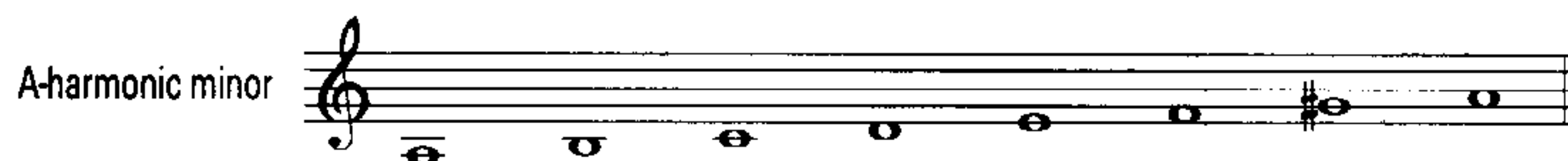
What significance does this have for a rock musician's everyday life? Here's a chord progression:

Jamtrack 21

33
CD INDEX

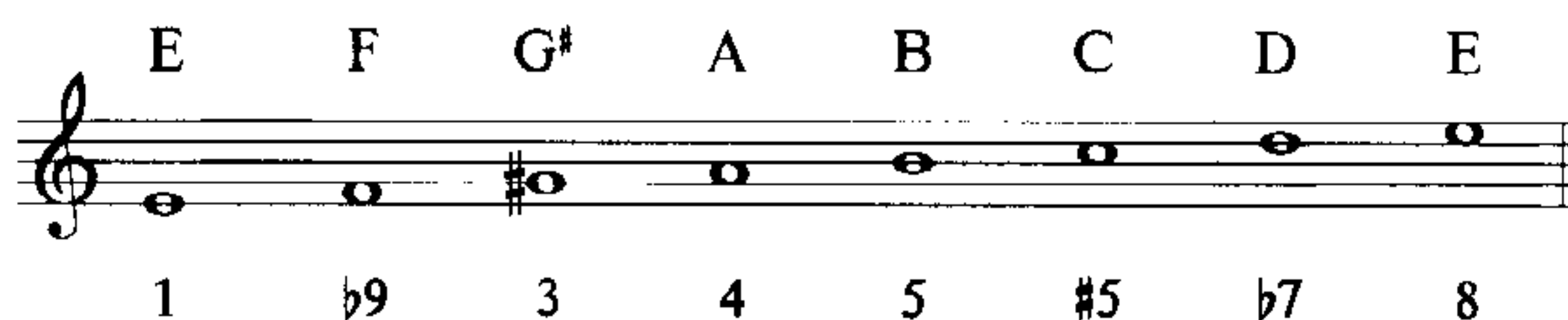


This is a relatively common chord progression in A minor, one which you've probably played at one time or another. To get some real color into your improvisation over these changes, play the (A) natural minor over Am, F and G and play (A) harmonic minor, starting on the E, over E 7 /G $\#$ (the fifth mode of A harmonic minor).



Compared to the E 7 chord, this scale offers you a variety of alternatives, notes that make the dominant seventh chord sound more colorful and exciting:

5. Mode A-harmonic minor



The fifth mode of the harmonic minor is the most frequently used mode of the harmonic minor scale. Because of its "Spanish" sound it has several different names:

E Spanish phrygian

E phrygian dominant

or simply **A HM 5**

This is the second scale, along with the mixolydian, that can be played over the dominant seventh chord.

Is it possible, then, to play a harmonic minor scale (for example. C harmonic minor) over the dominant seventh in C major (G^7)? In theory perhaps. My own ears wave a red flag here ... but for application in minor this choice of scale sounds quite tasteful.

SUMMARY:

Here again a short summary:

Play the harmonic scale a fifth lower over a dominant seventh chord in a minor key.

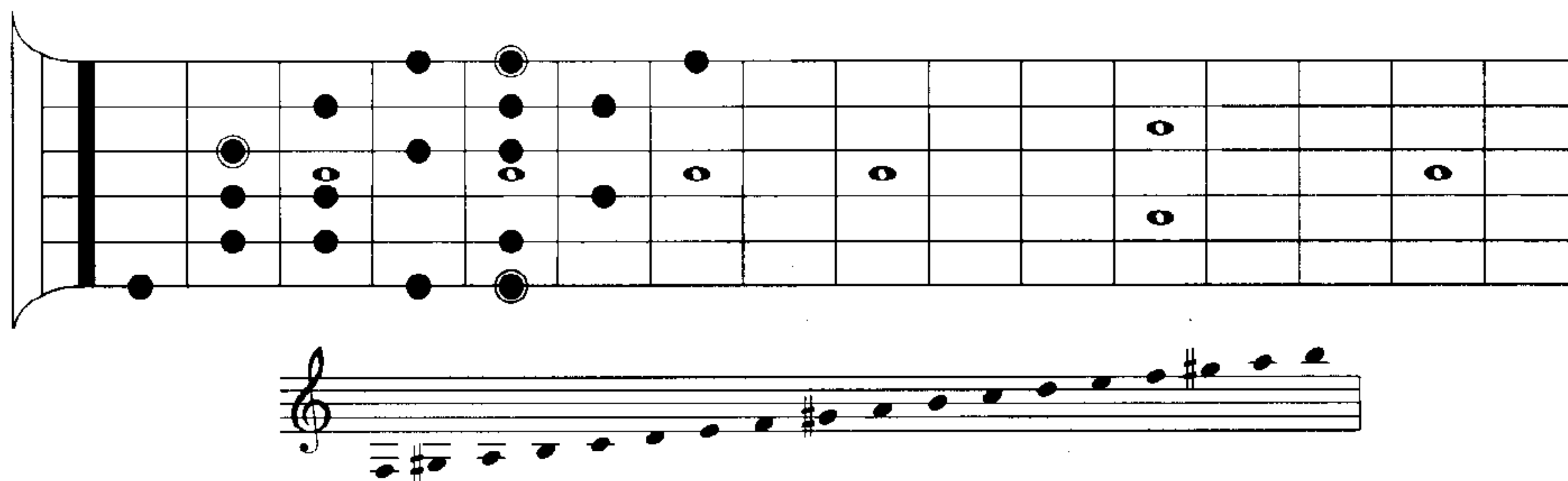
For example, over an E^7 (resolving to an A minor): the A harmonic minor scale.

In the next chapter on the melodic minor scale, you'll see that it offers similar possibilities.

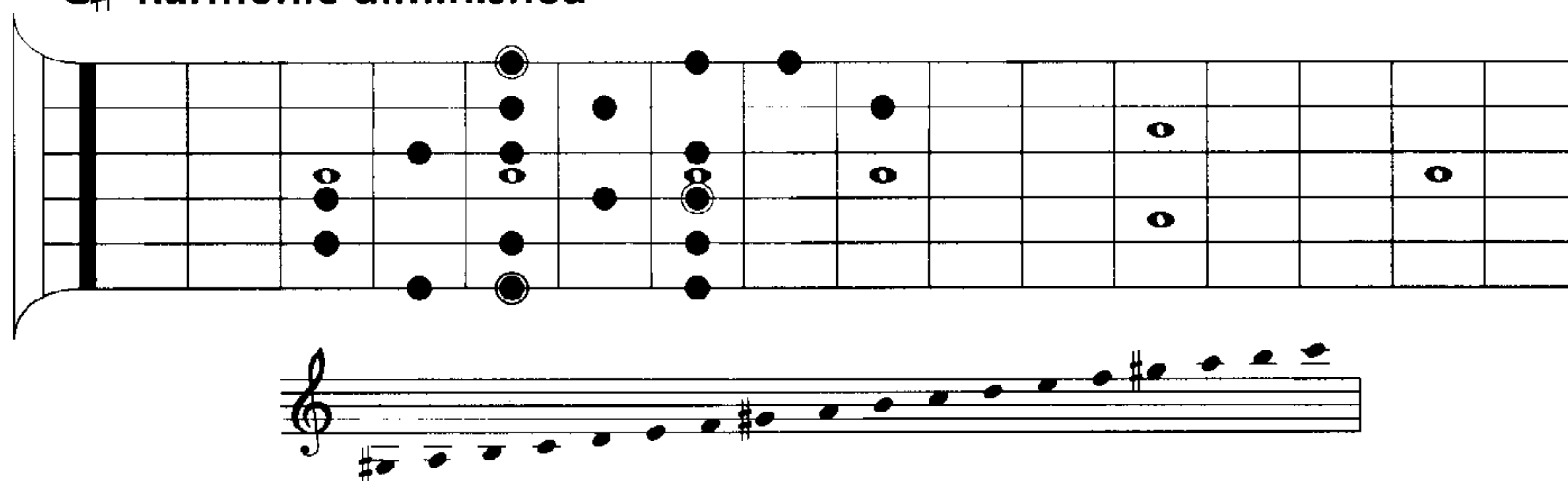
THE SEVEN MODES OF THE HARMONIC MINOR SCALE

Here are the seven positions of the modes of the harmonic minor scale in A. I've purposely avoided putting the scales in the five standard positions as in my opinion the resulting fingerings are confusing and "user unfriendly". For the sake of completeness, I've also attached the modal labels to the fingerings.

F-lydian #9



G#-harmonic diminished



A-harmonic minor

Diagram and notation for the A-harmonic minor scale. The diagram shows a 12-string fretboard with notes placed on strings 1-6. The notation shows the scale in treble clef: A2, A♭3, B♭3, C4, D4, E4, F♯4, G4, A4, B♭4, C5, D5.

B-locrian nat. 6

Diagram and notation for the B-locrian natural 6 scale. The diagram shows a 12-string fretboard with notes placed on strings 1-6. The notation shows the scale in treble clef: B2, C3, D3, E3, F3, G3, A♭3, B3, C4, D4, E4, F♯4.

C-ionian #5

Diagram and notation for the C-ionian #5 scale. The diagram shows a 12-string fretboard with notes placed on strings 1-6. The notation shows the scale in treble clef: C2, C3, D3, E3, F3, G3, A♭3, B3, C4, D4, E4, F♯4.

D-dorian #11

Diagram and notation for the D-dorian #11 scale. The diagram shows a 12-string fretboard with notes placed on strings 1-6. The notation shows the scale in treble clef: D2, E2, F2, G2, A2, B2, C3, D3, E3, F3, G3, A♭3.

E-phrygian dominant

Diagram and notation for the E-phrygian dominant scale. The diagram shows a 12-string fretboard with notes placed on strings 1-6. The notation shows the scale in treble clef: E2, F2, G2, A2, B2, C3, D3, E3, F3, G3, A♭3, B3.

Record a few minutes of each of the following chord progressions on tape and jam over them using these scales:

Jamtrack 22**34**
CD-INDEX

a) A-harmonic minor /
 b) A-harmonic minor /

A-blues scale /
 A-dorian /

Jamtrack 23**35**
CD INDEX

A-harmonic minor / / /

Jamtrack 24**36**
CD INDEX

a) F#-minor pent. / B-minor pent. /
 b) F#-aeolian / B-dorian /
 c) F#-harmonic minor / B-harmonic minor /

Jamtrack 25**37**
CD INDEX

D-aeolian / / D-harmonic minor

PROJECT:

- Play fingerboard diagram 7. Now try this:
play an $Am^{\Delta 7}$ (A C E G \sharp) arp over one octave. Now a Bm^{7b5} , and then the arps of the remaining diatonic chords ($Cmaj^7$, Dm^7 , E^7 , $Fmaj^7$, $G\sharp^{07}$).
Do this in every position and try to find your own licks using this concept.
- Play the new scale positions with the scale sequences that you already know and can play.
- Although the 5th mode of the harmonic minor is the most commonly used, you can also, as with the major scale, play every mode over its diatonic chord. It's a matter of taste.

TIP:

Further licks using the harmonic minor can be found in my book "Masters of Rock Guitar", in the chapters on the following guitarists:

Ritchie Blackmore – Lick 10, 11, 14, 15 (pg. 63–65);

Randy Rhoads – Lick 7, 10 (pg. 105, 107);

Yngwie Malmsteen – Lick 2, 3, 4, 5, 11, 12 (pg. 112–114, 118);

Gary Moore – Lick 14 (pg. 126).

Chapter 15

THE MELODIC MINOR

Positions

Modes

Altered Scales

Licks

What the "classical"-sounding harmonic minor is for the heavy metal faction, the much "jazzier" melodic minor is for the fusion players. (Not that I intend to widen the gap between these two musical styles in this book).

Before you jump into this new scale, a word of warning: the melodic minor sounds, to put it politely, a bit sparse at first. You have to give yourself time to get used to this unusual-sounding scale. With a bit of patience you'll find you'll have some very hip sound possibilities a la Larry Carlton, John Scofield, Allan Holdsworth, Scott Henderson, Mike Stern, etc. at your command.

In the melodic minor scale, the sixth note is raised half a step as well as the seventh.

A-natural minor



A-melodic minor

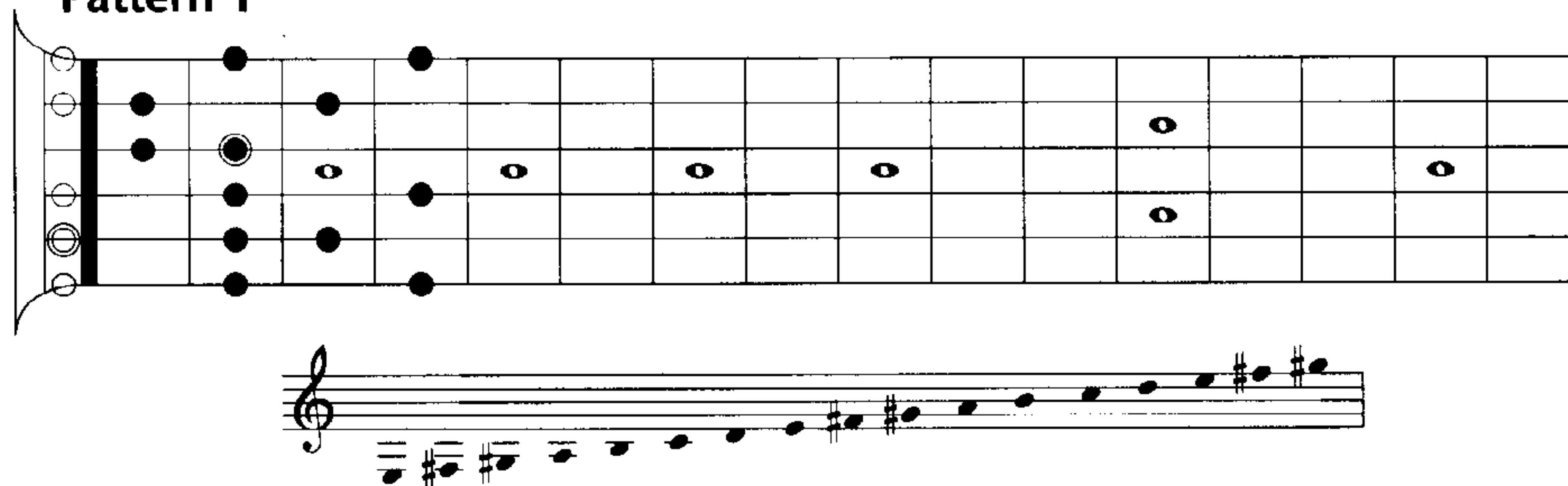


I myself lose track of things as soon as two notes in the basic scale are changed. This is the reason I prefer to think of the melodic minor as a major scale with a minor third

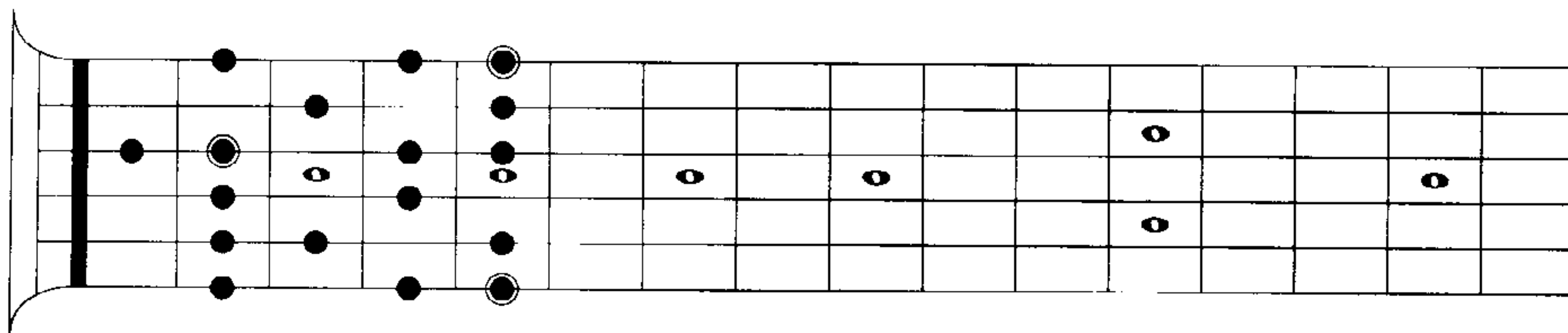
THE FIVE POSITIONS OF THE MELODIC MINOR SCALE

To make this chapter accessible and more "playable" to the metal players as well as the jazzers, the scale fingerings here are in both the five standard positions and in **three-notes-per-string** style.

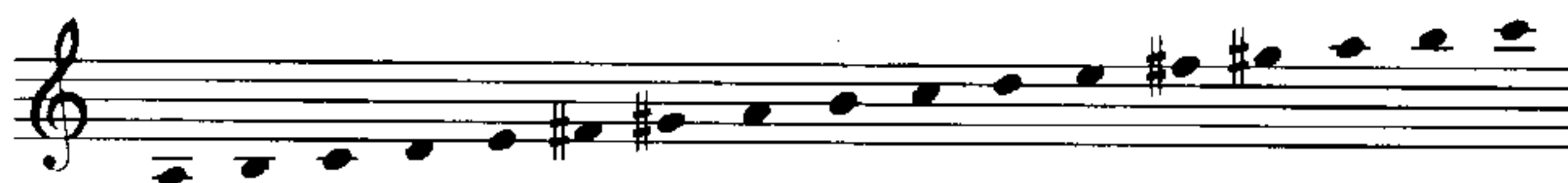
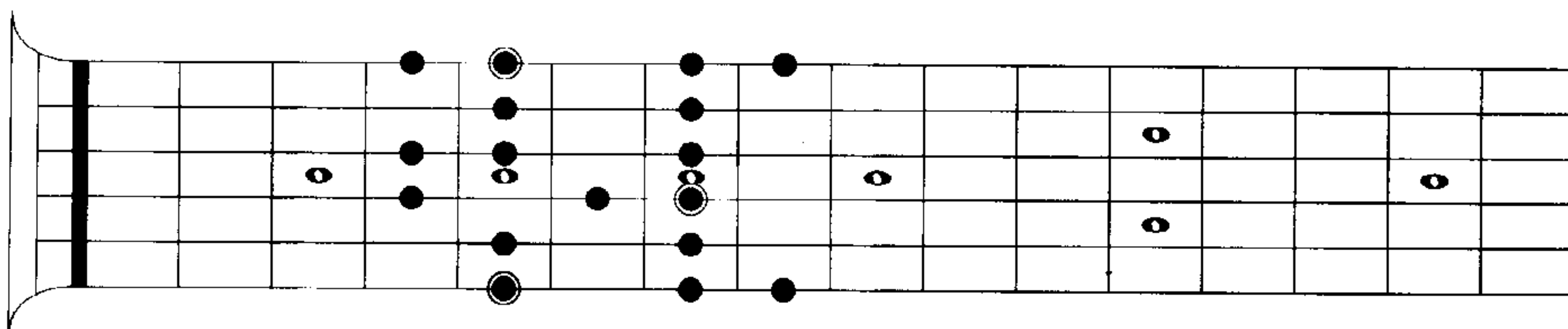
Pattern 1



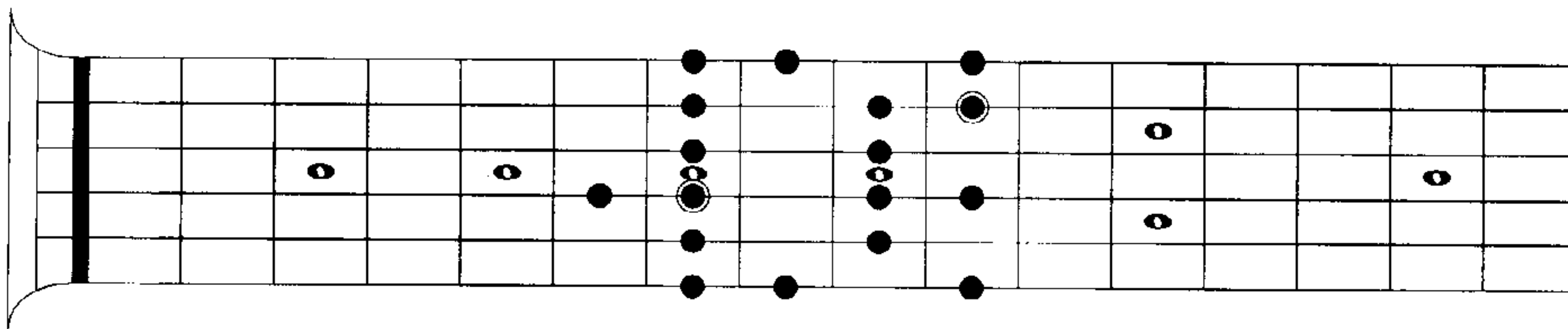
Pattern 2



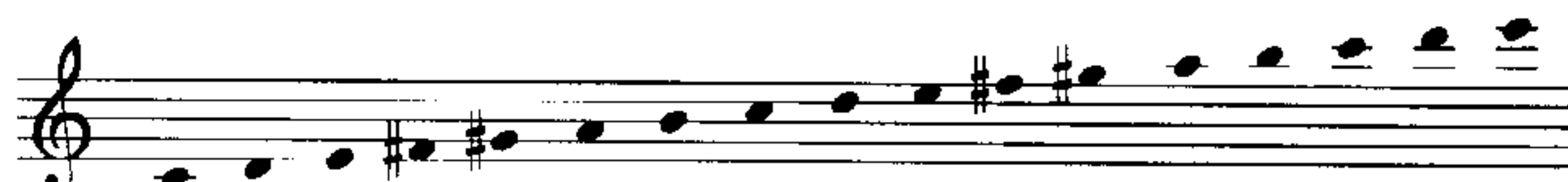
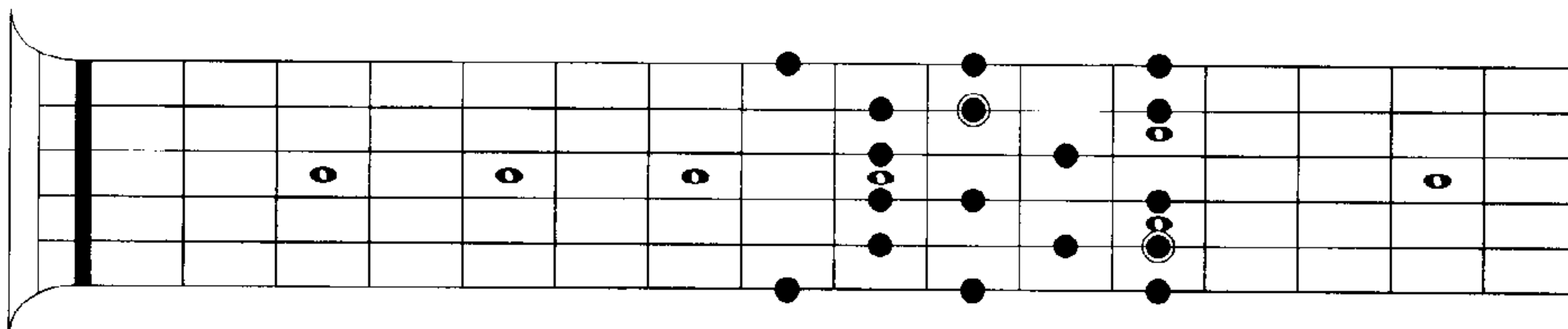
Pattern 3



Pattern 4



Pattern 5



MELODIC MINOR MODES IN 3-NOTES-PER-STRING STYLE

F#-locrian #2

The fretboard diagram for F#-locrian #2 shows the following notes: F# (1st fret, 6th string), G# (2nd fret, 5th string), A (2nd fret, 4th string), B (3rd fret, 3rd string), C# (4th fret, 2nd string), D# (5th fret, 1st string), E (5th fret, 4th string), F# (6th fret, 3rd string), G# (7th fret, 2nd string), A (7th fret, 1st string), B (7th fret, 5th string), and C# (8th fret, 4th string). The musical notation shows the ascending scale: F#-G#-A-B-C#-D#-E-F#-G#-A-B-C#.

G#-altered

The fretboard diagram for G#-altered shows the following notes: G# (2nd fret, 5th string), A (2nd fret, 4th string), B (3rd fret, 3rd string), C# (4th fret, 2nd string), D# (5th fret, 1st string), E (5th fret, 4th string), F# (6th fret, 3rd string), G# (7th fret, 2nd string), A (7th fret, 1st string), B (7th fret, 5th string), C# (8th fret, 4th string), and D# (8th fret, 3rd string). The musical notation shows the ascending scale: G#-A-B-C#-D#-E-F#-G#-A-B-C#-D#.

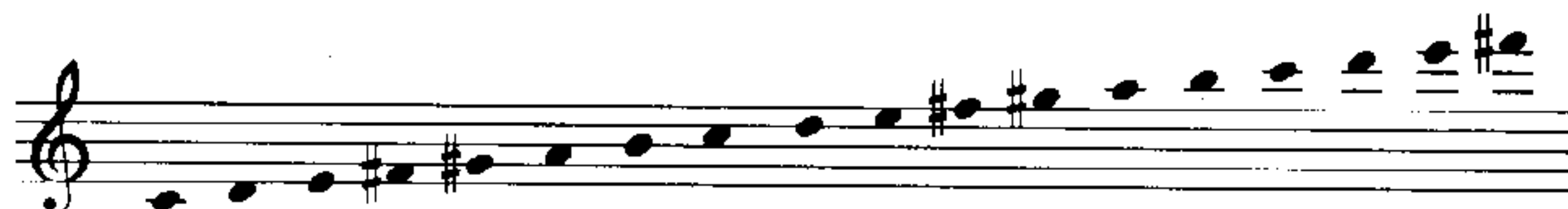
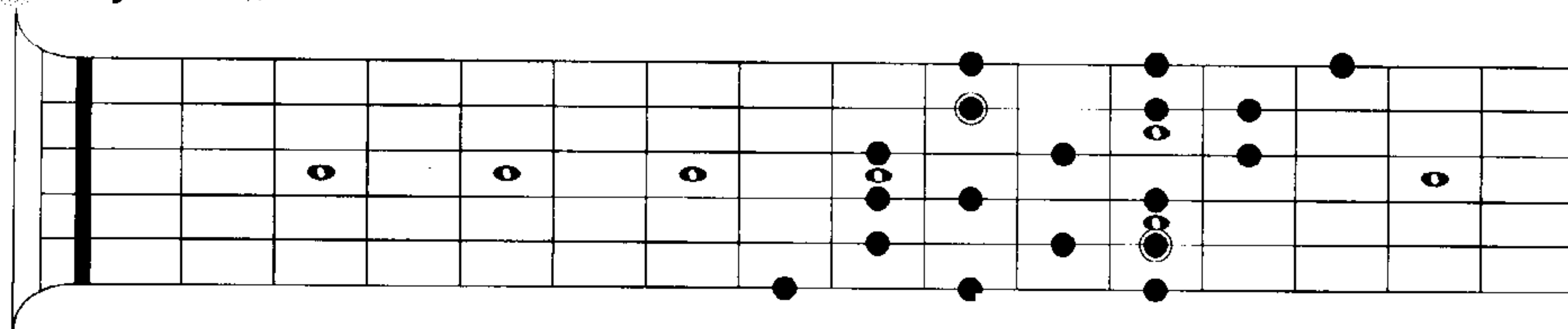
A-melodic minor

The fretboard diagram for A-melodic minor shows the following notes: A (5th fret, 4th string), B (5th fret, 3rd string), C# (6th fret, 2nd string), D# (7th fret, 1st string), E (7th fret, 5th string), F# (8th fret, 4th string), G# (8th fret, 3rd string), A (8th fret, 2nd string), B (8th fret, 1st string), C# (9th fret, 5th string), D# (9th fret, 4th string), and E (9th fret, 3rd string). The musical notation shows the ascending scale: A-B-C#-D#-E-F#-G#-A-B-C#-D#-E.

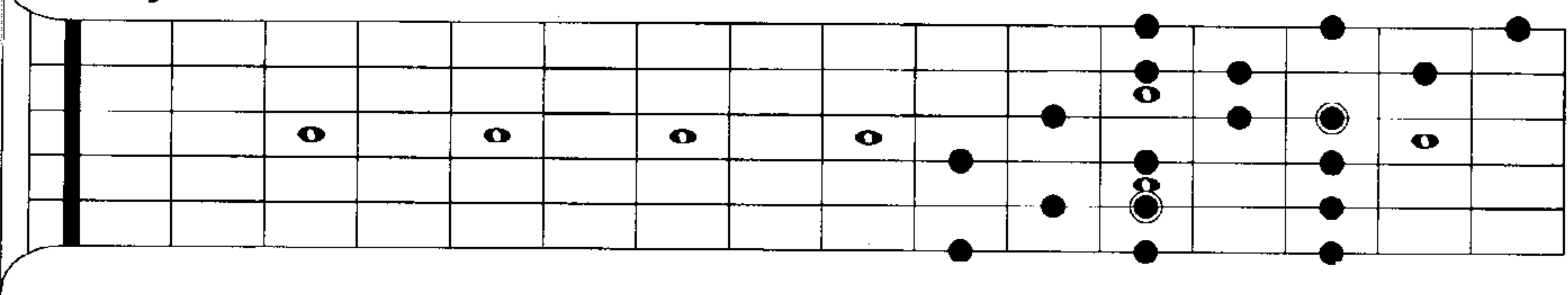
B-locrian b9

The fretboard diagram for B-locrian b9 shows the following notes: B (7th fret, 3rd string), C# (8th fret, 2nd string), D# (9th fret, 1st string), E (9th fret, 5th string), F# (10th fret, 4th string), G# (10th fret, 3rd string), A (10th fret, 2nd string), B (10th fret, 1st string), C# (11th fret, 5th string), D# (11th fret, 4th string), E (11th fret, 3rd string), and F# (11th fret, 2nd string). The musical notation shows the ascending scale: B-C#-D#-E-F#-G#-A-B-C#-D#-E-F#.

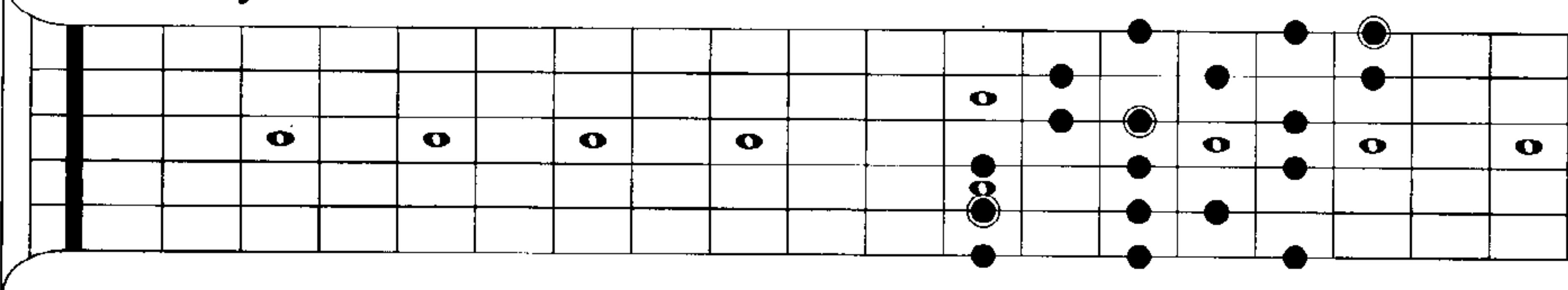
C-lydian #5



D-lydian b7



E-mixolydian b13



PROJECT:

- Play the new scales in different sequences.



FUNCTIONAL AND STATIC CHORDS

The melodic minor scale, like harmonic minor, is a scale which is used mainly as a mode over one of its diatonic chords. With harmonic minor this was primarily the 5th mode, the Spanish-phrygian scale over an altered dominant seventh chord (Ch. 14, pg. 137).

In order to grasp the different possibilities offered by the melodic minor scale, we have to make a short theoretical side trip:

Dominant seventh chords again. There are two categories of dominant sevenths; **functional** and **static** (non-functional) chords.

What does this mean?

Functional **dominant seventh chords** always resolve to the tonic (eg. G^7 - C_{maj} , V - I in major; or G^7 - C minor, V - I in minor).

Static dominant chords don't do this, meaning they can be followed by any other chord except the tonic.

So far you've learned two ways to improvise over dominant sevenths; the **mixolydian scale** (5th mode of the major scale) and the **Spanish-phrygian scale** (5th mode of the harmonic minor). You can play the mixolydian scale over both types of dominant seventh chords, the HM 5 mainly over functional ones.

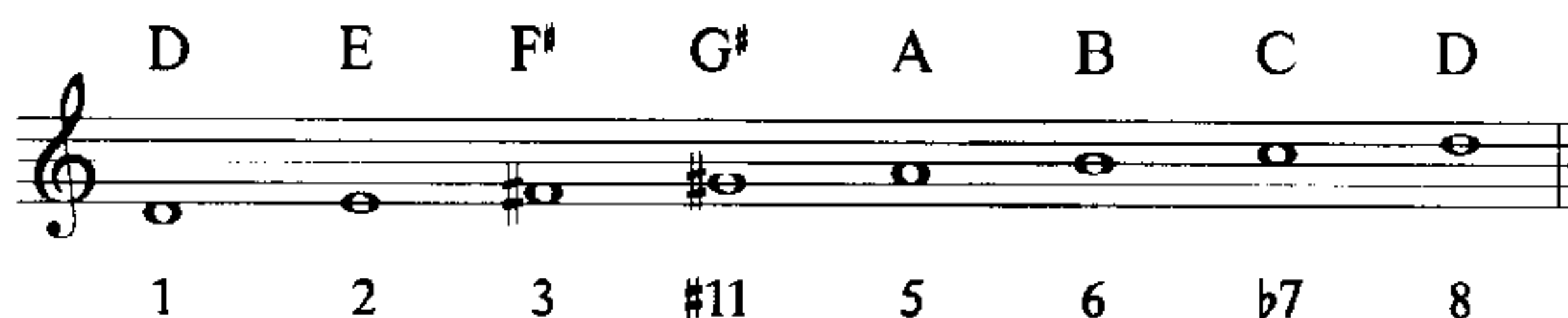
Now let's look at the melodic minor. Here are the diatonic chords for it in A:



The 7th chord can also be seen as an altered dominant seventh chord. (More on this later).

This means that there are three dominant seventh chords to be found in the melodic minor scale: on the 4th, 5th and 7th steps. Of particular interest for us are the 4th and the 7th modes.

A-melodic minor - 4. mode



Over the D^7 chord, for example, we find the following extensions:

D	F $\#$	A	C	E	G $\#$	B
1	3	5	~ 7	9	$\#11$	13

This scale is very similar to the lydian scale. The only difference is the $b7$, which is why it's often called lydian $b7$ (lydian flat seventh). It works best as a substitute for the mixolydian played over a static dominant seventh chord. The "right" chord for this scale would be a $D7^{#11}$ which is often incorrectly labeled $D7^{b5}$.

To avoid having to learn thousands of new positions again for this mode, just think like this:

over D^7 : play A melodic minor (mel. minor up a fifth).

THE SUPER LOCRIAN (ALTERED SCALE)

Now on to the next application:

Seventh Mode of the Melodic Minor Scale

G#	A	B	C	D	E	F#	G#
1	$b2$	$b3$	$b4$	$b5$	$b6$	$b7$	8
	$b9$	$\#9$	3		$\#5$		

This scale is called the **super locrian scale**. The label "locrian" refers to the interpretation of the 7th diatonic chord as $G\#m^{7b5}$. The intervals, though, can also be interpreted as presenting every possible alteration of the dominant seventh chord. For this reason, this scale is usually called the **altered scale**, sometimes called the "jazz minor", and actually only rarely the "super locrian". The altered scale is used exclusively over functional dominant seventh chords.

To save time and mental energy I myself never actually think of this scale in those terms, using the melodic minor fingerings as a basis instead. So with A^{7alt} I simply go for the melodic minor half a step higher: Bb melodic minor.

Because of its pretty "outside" sound, you should, as I've already said, give yourself enough time to get used to this scale. And although it sounds jazzier, that doesn't mean that it's allergic to distortion.

Here's a brief diagram summing up the various possibilities:

Static dom7	Scale	
1) G ⁷	G mixolydian	(C major)
2) G ⁷ (#11)	G lydian b7	(D melodic minor)
3) G ⁷ (b13)	G mixolydian b13	(C melodic minor)
Functional dom ⁷	Scale	
1) G ⁷	G Mixolydian	(C Major)
2) G ⁷ (#5,b9)	G Spanish-phrygian	(C harmonic minor)
3) G ⁷ (b5,#5,b9,#9)	G altered scale	(A ^b melodic minor)

And here are some more very good-sounding applications:

1) F#m ^{7b5}	F# locrian	(G major)
2) F#m ^{7b5}	F# locrian nat,6	(E harm. minor)
3) F#m ^{7b5}	F# locrian #2	(A mel. minor) very hip!

The more tasteful and, in my opinion, the better and more musical way to make these scales your own is to comparing them to each other, picking out each of the characteristic and important notes thus using them effectively and purposefully. This way you'd only have to learn a few notes and would be able to get away from the at times boring routine of pattern and scale doodling. Hmmm ... food for thought.

But enough words, for now. . Here are some cool licks built with melodic minor material. They're all in A melodic minor. Play them over Am (a bit strange, but good), D⁷ (lydian b7 sound), F#m^{7b5} (locrian #2 sound) and A^{b7alt} (altered sound).

Lick 68



Lick 69

38
CD INDEX

BU RB P BU RB P SL

SL

BU RB P BU RB P SL

12 (13) 12 10 12 (13) 12 10 9 12 10 9 10 12 9 11 12 9 10 12 9 10 11 11

H H H H

Lick 70

38
CD INDEX

SL H H H H H H H H

SL H H H H H H H H

12 15 14 11 12 15 14 13 12 13 12 16 16 15 14 12 15 12 13 14 12 13 14 14

Lick 71

38
CD INDEX


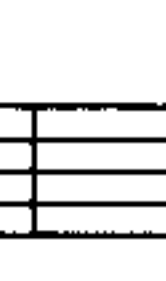

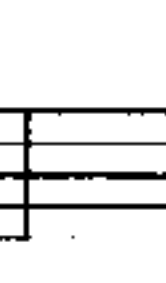

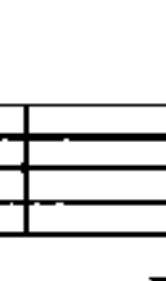

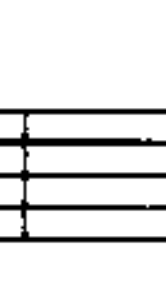

BU RB BU BU

BU RB BU BU

5 7 (8) (8) 7 5 8 (10) 5 5 7 (9) (9) 5 7 7

Jamtrack 26



	Em ⁷		Gm ⁷
E-dorian	⌵	G-dorian	⌵
	B ^b Δ ⁷		Bm ^{7b5}
B ^b -lydian	⌵	B-locrian #2	E-altered
	Am ⁷		F [#] m ^{7b5}
A-dorian	⌵	F [#] -locrian #2	⌵
	Fm ⁷		Cm ⁷
F-dorian	⌵	C-dorian	⌵
	B ⁷		
B-altered	⌵		

As with arpeggios and the other scales, the best way to practice melodic minor is in a musical context. Play this chord progression in mega-chops style (see pg. 56)

PROJECT:

- You can also use the melodic minor to get more cool notes into the blues.
For example: blues in A: A⁷ and D⁷ as lydian b⁷, respectively, E⁷ as altered chord.
- Don't forget DISTORTION!! (This is a rock book!!)
- Don't forget arpeggios!! (see project, chapter 14, p. 142)
- As in chapter 11 (chord substitution and arp superimposition, pg. 106), you can also play extended arps in melodic minor.
For example: over A⁷ try the arps from E mel. minor (lydian b⁷ sound) or B^b mel. minor (altered sound).

TIP:

Another melodic minor lick can be found in my book "Masters of Rock Guitar" under Gary Moore - lick 15 (pg. 126)

Chapter 16

EXOTIC SCALES

Whole Tone Scale

Diminished Scales

The Enigmatic Scale

After our short side trip to the Jazz-rock/fusion department, in this chapter I'd like to discuss some scales that (so far) haven't been used too often in rock music, but which sound great. They are used now and then by guitarists like Nuno Bettencourt, Marty Friedman or Joe Satriani.

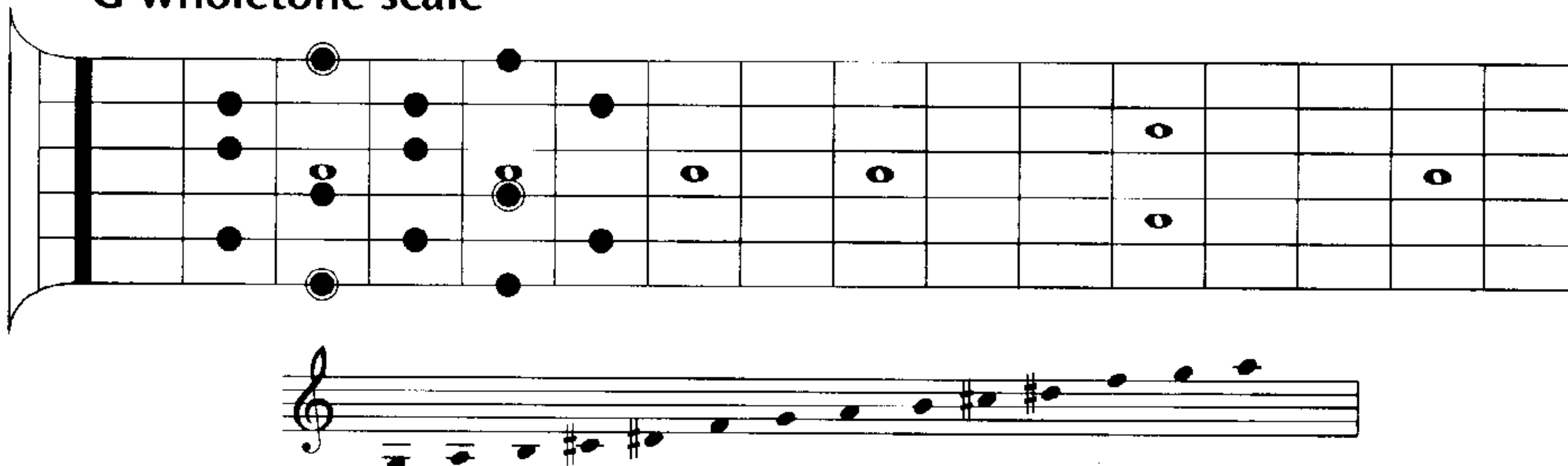
THE WHOLE TONE SCALE

The first of these is the whole tone scale. It's one of the symmetrical scales, that is, its notes always come in the same sequential order, in whole tone steps

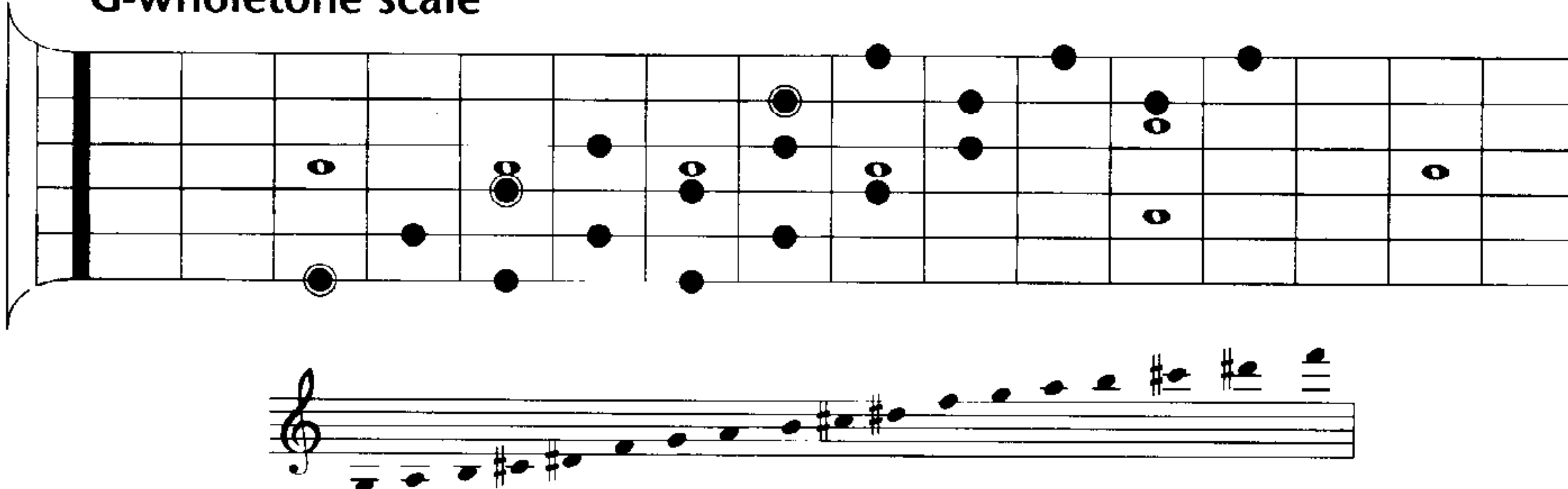


Here are two fingerings for the whole tone scale in G;

G-wholetone scale



G-wholetone scale



Because of its symmetrical structure, every note in the scale can be seen as the tonic note. Thus the whole-tone scale = A whole-tone scale = B whole-tone scale, etc. So there are in fact only two different whole-tone scales; you could call them G and G \sharp , if you like.

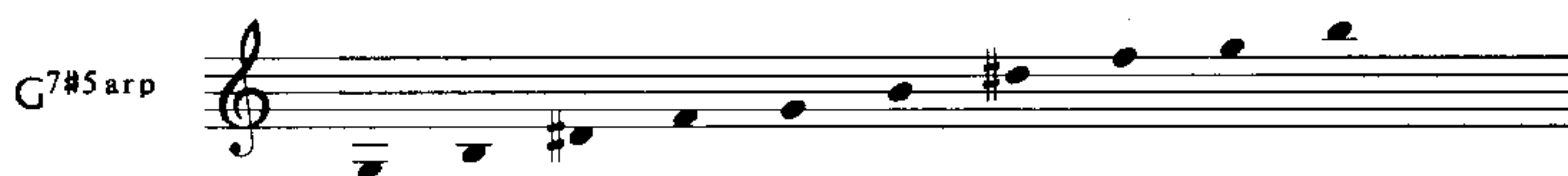
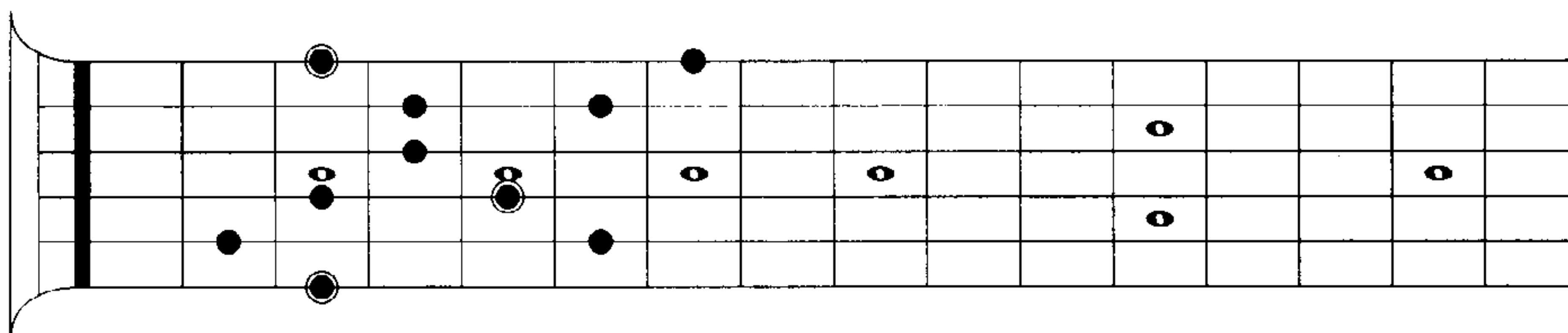
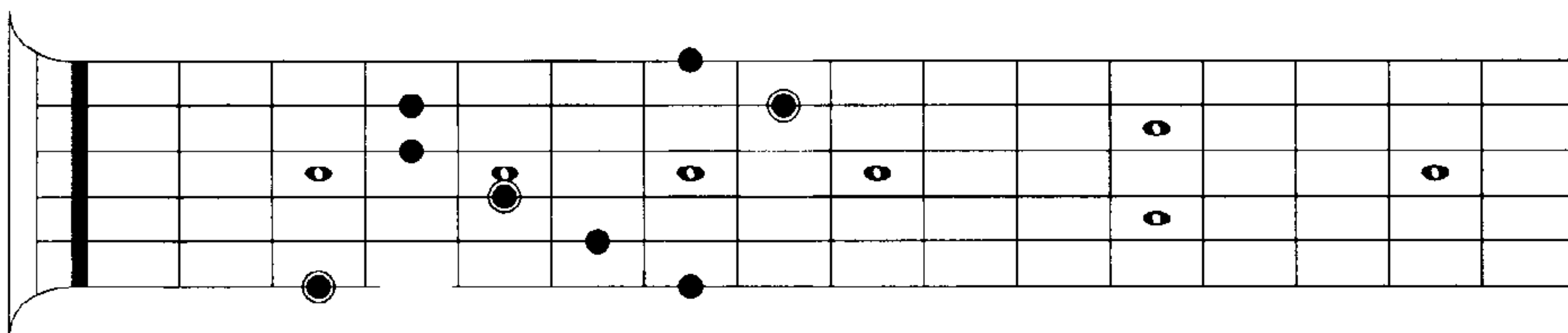
Once again, this scale is used over a dominant seventh chord, a functional dominant seventh chord. If you don't remember what this means, refer back to chapter 15, pg. 148.

As you can see by the intervallic structure, this is the dominant seventh chord with the $\flat 5$, actually more frequently with the $\sharp 5$ (for example G $^7\sharp 5$).

You can also use it over an augmented chord.

There are two exciting-sounding arpeggios that can be constructed from the whole-tone scale: the augmented arpeggio and the G $^7\sharp 5$ arp.

Here are two fingerings for them:

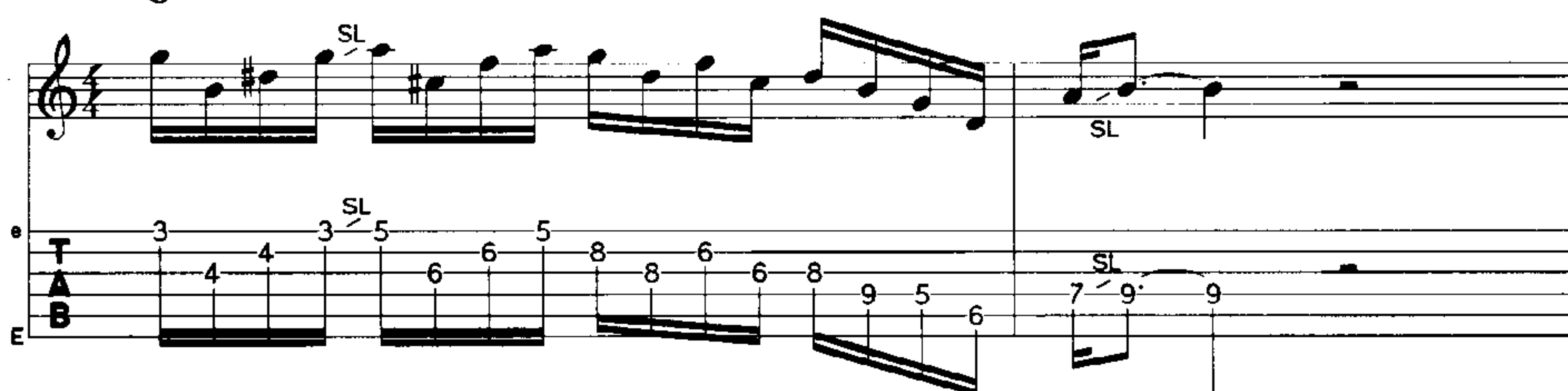


Check out these two licks:

Lick 72

40
CD INDEX

G $^7\sharp 5$





Lick 73

40
CD INDEX

A^{7#5}

PROJECT:

– Sequences like groups of 3 and 4. seconds, thirds, etc.

THE DIMINISHED SCALE

The next scale is the diminished scale, which, like the whole-tone scale, is also one of the symmetrical ones. It consists of alternating whole and half steps. For this reason it's also called the whole-tone/half-tone scale.

B^b-diminished scale

B^b C C[#] E^b E F[#] G A B^b

It's played over diminished chords (eg. B^b dim.) or diminished seventh chords (eg. B^b dim 7). Here are two fingerings for this scale:

B^b-diminished scale

B^b-diminished scale

This scale "repeats" itself, due to its construction in intervals of a minor third. So G dim. scale = B \flat dim. scale = D \flat dim. scale, etc. In contrast to the whole-tone scale there are three different diminished ones: G, G \sharp and A or C, C \sharp and D, etc.

You can probably guess what the next step will be ...

ARPEGGIOS

This time it's the diminished arp:

THE HALF-STEP / WHOLE-STEP SCALE

There's another, highly interesting way of using this scale, and that's as the half-tone/whole-tone scale (also called the dominant-diminished).

If you start the diminished scale half a step lower, it will automatically acquire the half-tone/whole-tone structure.

B \flat -diminished scale

A-dominant diminished scale

As you can see, in this scale a lot of altered dominant seventh chords are to be found: A^{7b9} , $A^{7\#9}$, A^{7b5} , which the scale can be played over.

For me personally this is too much "thinking". As with the melodic minor, I always think:
over A^{7b9} (for example) play the diminished scale a half step higher.

As usual, here are some licks for it:

Lick 74

41
CD INDEX

Lick 75

41
CD INDEX

PROJECT:

- Sequences!!!!!!
- Try to use these scales with all the playing techniques that you know.

By the way, if you choose any note from a dim.7 chord and take it down a half step, this will bring you to a dominant seventh chord.

for example: F^{07}

F	B	D	A^b
F	B	D	A^b
F	B	D	A^b
F	B	D	A^b

F	B	D	G	=	G^7
F	B	D^b	A^b	=	D^b7
F	B^b	D	A^b	=	B^b7
E	B	D	A^b	=	E^7

This is also the reason why it's possible (and very hip) to play these arps or their triads over, for example, a G⁷ chord.

Here's just such a lick:

Lick 76

41

CD-INDEX

G⁷

Here are a few more progressions for jamming on.

Pay attention to the different ways in which you can improvise over them!

Jamtrack 27

42

CD-INDEX

a) B ^b -dim scale	✓	D-aeolian	✓
b) B ^b °-arp	✓	D-dorian	✓
c) A ^Δ , C ^Δ , E ^Δ , F ^Δ triads	✓	D-dorian	✓

Jamtrack 28

43

CD-INDEX

a) D-dorian	G-wholetone	C-ianian	A-wholetone
b) D-dorian	G7#5-arp	C-lydian	A7#5-arp
c) D-dorian	G ⁺ -arp	C-lydian	A ⁺ -arp

Jamtrack 29

44

CD-INDEX

a) A-dorian	D-wholetone	G-ianian	F-dim.scale
b) A-dorian	D7#5-arp	G-lydian	F-arp
c) A-dorian	D ⁺ -arp	G-lydian	A-harmonic minor

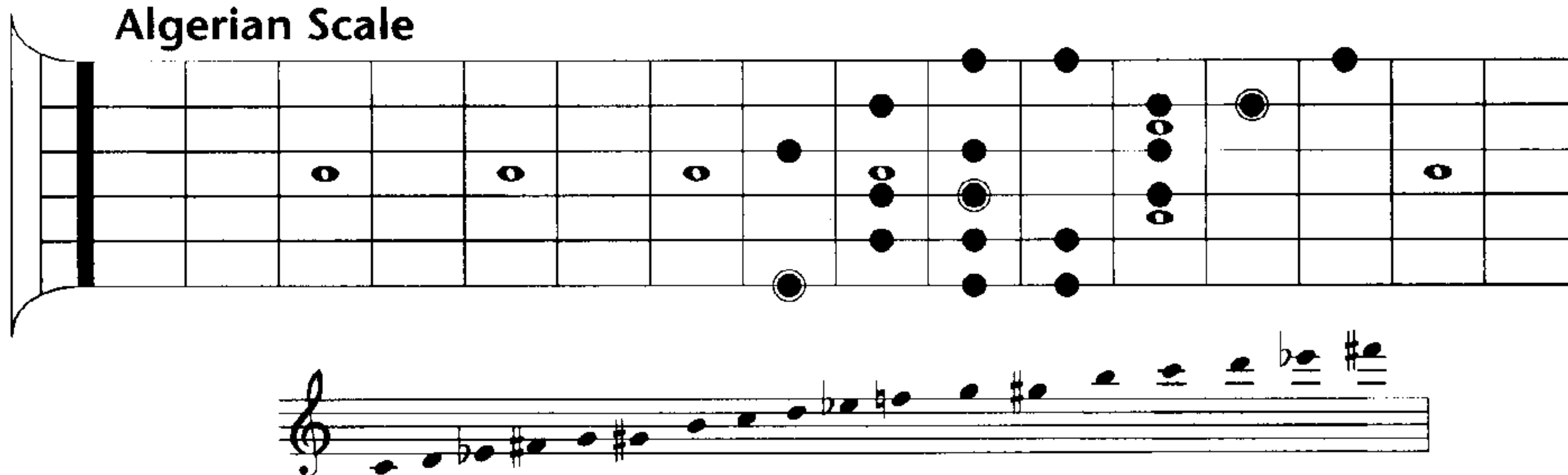
EXOTIC SCALES

And now for something really exotic! Due to the wide variety of different musical cultures on this planet, there is of course a corresponding number of different scales. Some are pentatonic, others have 6, 7 or more notes.

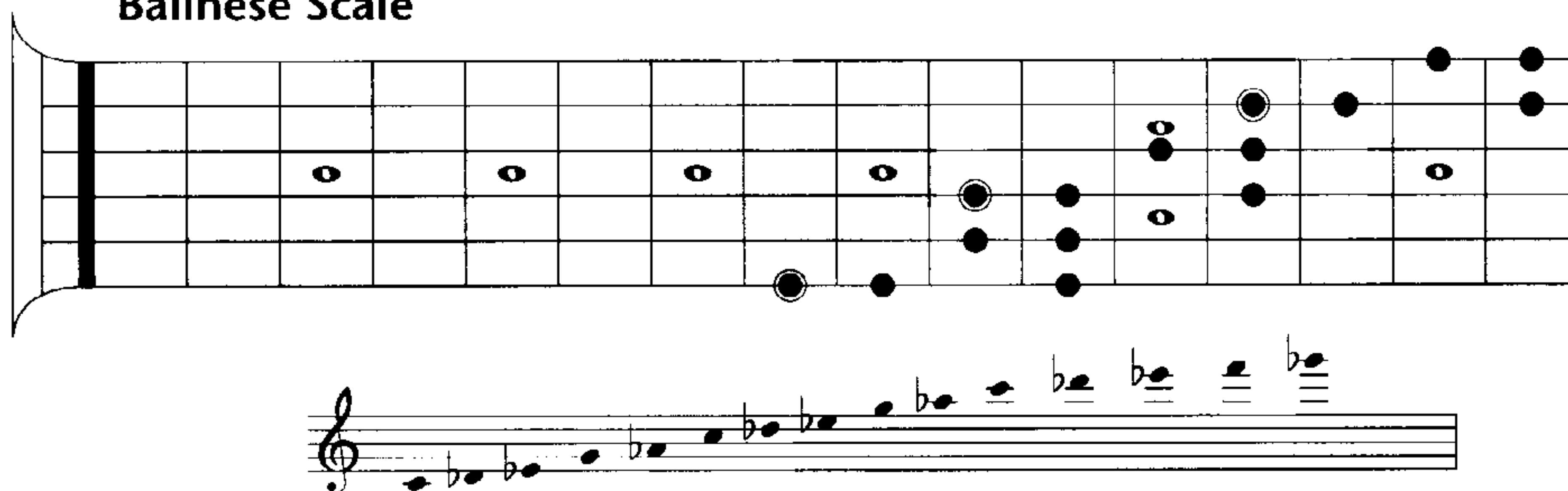
Here are several ones that I've come across into in the course of time:

Algerian	C	D	E \flat	F \sharp	G	A \flat	B	C	D	E \flat	F
Arabian	C	D	E \flat	F	G \flat	A \flat	A	B			
Balinese	C	D \flat	E \flat	G	A \flat	C					
Chinese	C	E	F \sharp	G	B						
Japanese 1	C	D	E \flat	G	A \flat						
Japanese 2	C	D	E	G	A \flat	(very hip)					
Egyptian	C	D	F	G	B \flat						
Enigmatic	C	D \flat	E	F \sharp	G \sharp	A \sharp	B				

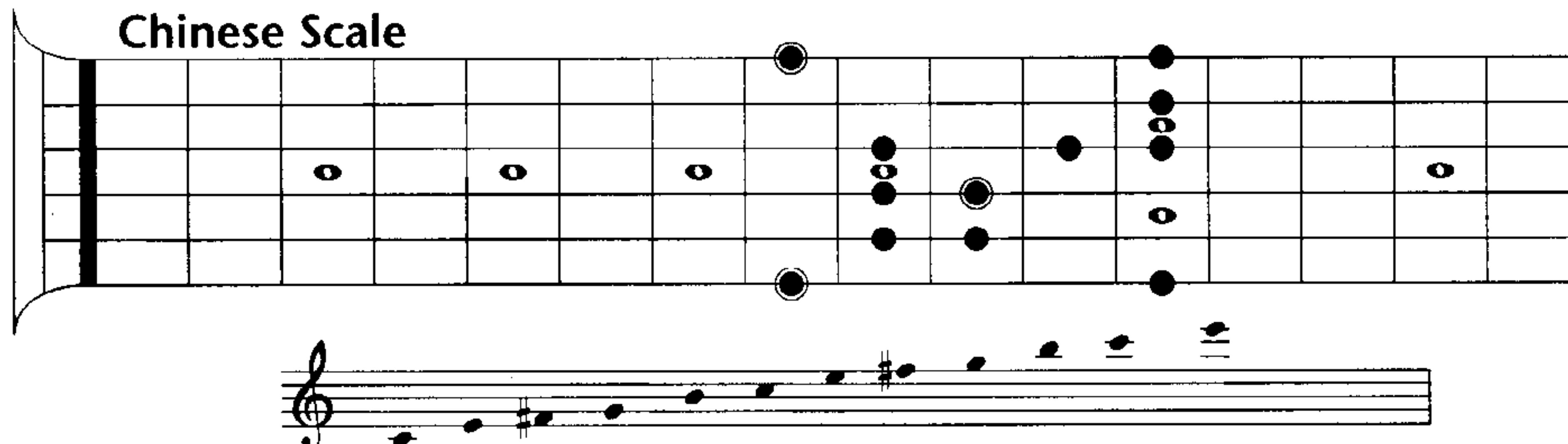
Algerian Scale



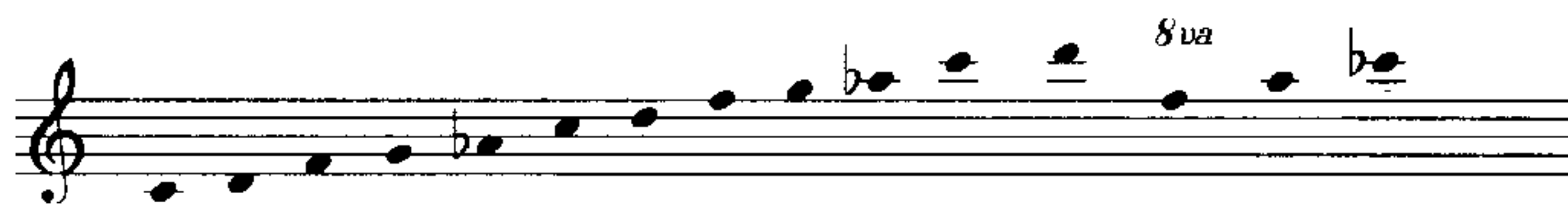
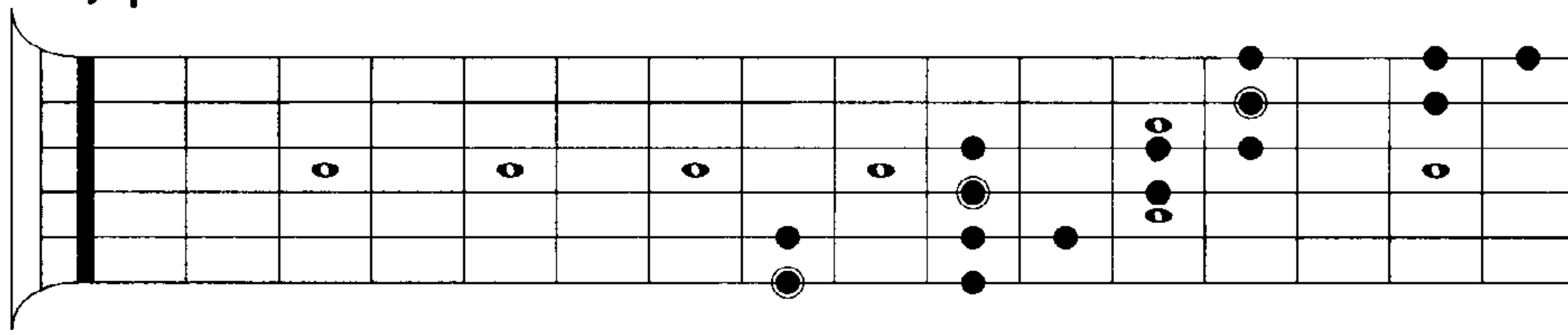
Balinese Scale



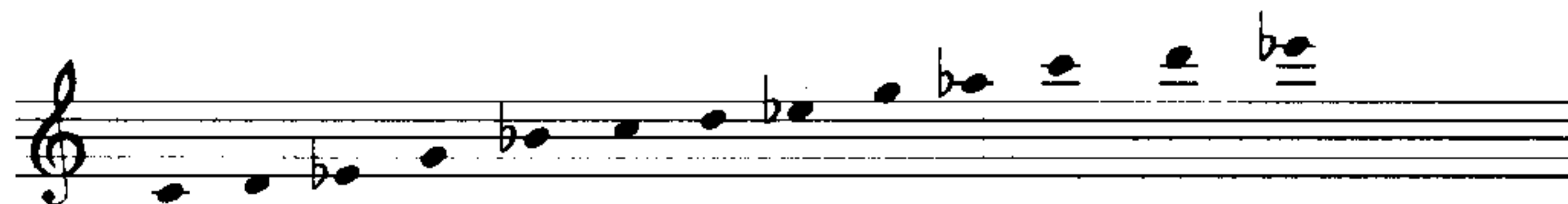
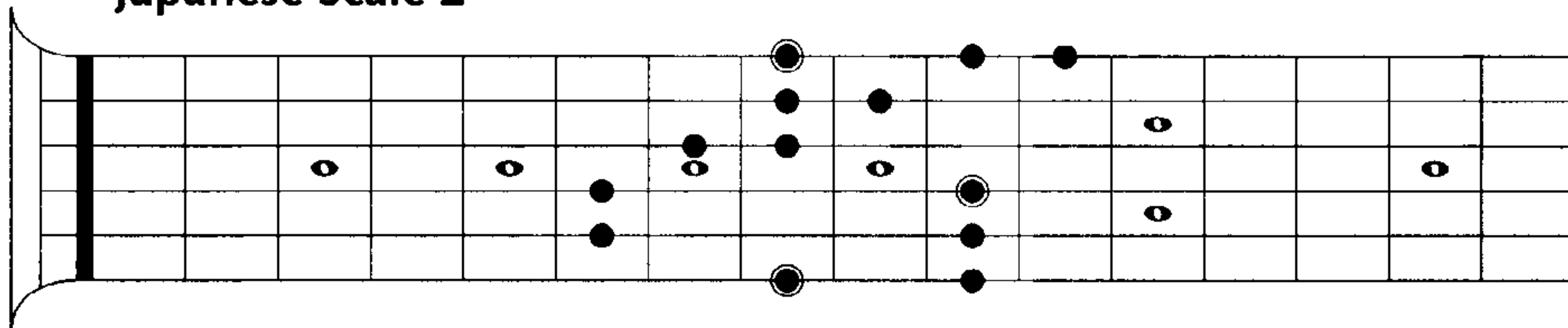
Chinese Scale



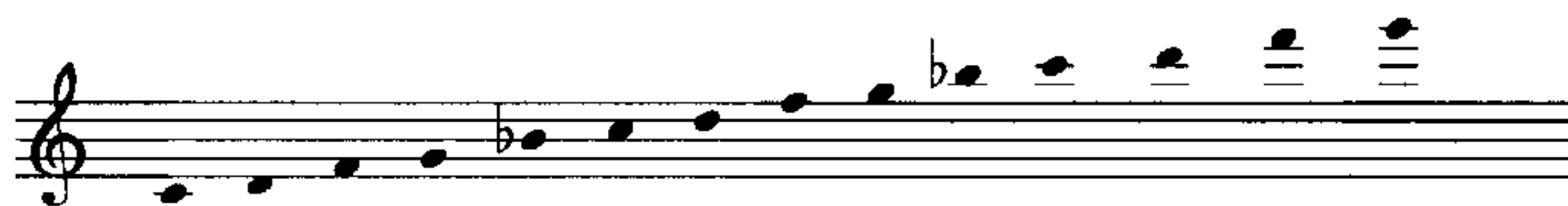
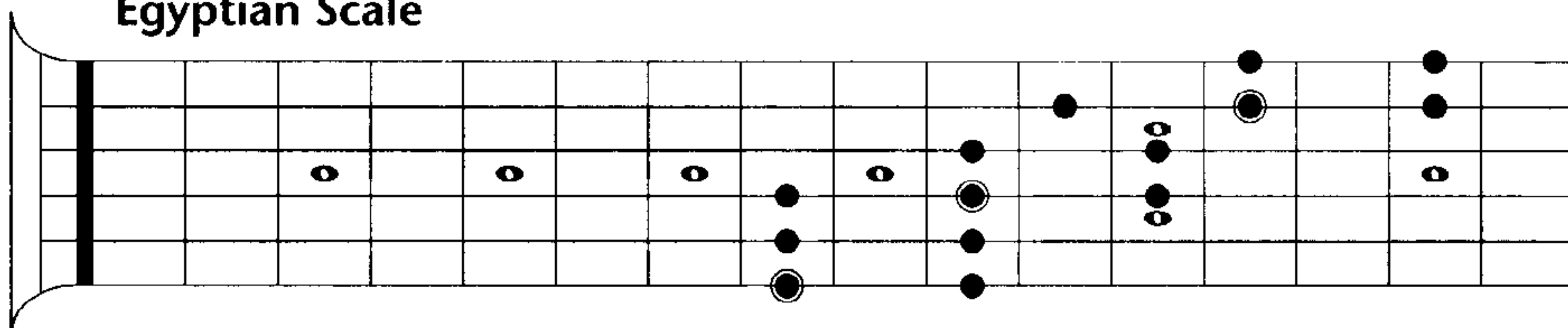
Japanese Scale 1



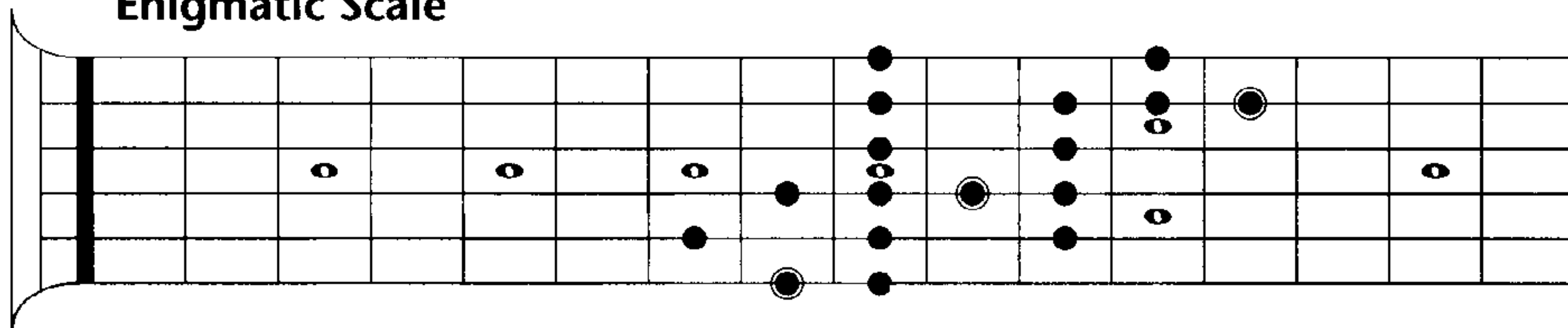
Japanese Scale 2



Egyptian Scale



Enigmatic Scale



THE ENIGMATIC SCALE


The enigmatic scale, with which, incidentally, **Joe Satriani** wrote the song "The Enigmatic" for his first solo LP, offers a good example of how to make music with these foreign-sounding scales.

The real problem is how to find or create chord progressions which the scale fits over.

Easy as pie: you just build, as we did with the major, harmonic minor and the melodic minor scale, three and four-note chords and play the scale over them. That's all there is to it! So don't get put off by these sounds that probably seem a bit strange to you... give your ears some time.

C-enigmatic scale

C	D ^b	E	F [#]	G [#]	A [#]	B	C
---	----------------	---	----------------	----------------	----------------	---	---



I	II	III	IV	V	VI	VII	VIII
C ^{maj7#5}	F ^{#7b5} /D ^b	E ⁶	F ^{#7b5}	G ^{#m11}	C ^{+/A#}	B ^{maj9}	C ^{maj7#5}

Try out this chord progression:

I | VII | III | V :||

PROJECT:

- Use the same procedure with the other scales.
- **DON'T PANIC!!!**
- Invent your own scales, and experiment around with them.

TIP:

Further licks with exotic scales can be found in my book "Masters of Rock Guitar" in the chapters on the following guitarists:

Randy Rhoads – Lick 7 (pg. 105); **Yngwie Malmsteen** – Lick 3 (pg. 114)

Chapter 17

THE TREMOLLO ARM

The Whammy Bar

The Dive Bomb

Wang Bar Dips

Legato Phrasing

Welcome to the whammy bar!

As with string bending and two-hand tapping, the myriad applications of the tremolo arm are techniques which are the exclusive territory of electric guitarists.

And there are as many names for this device as there are sounds that you can make with it: whammy bar, wang bar, twang bar, vibrato arm, tremolo arm (or even, try this, in Germany: Wimmerhaken, Wibbel), to mention a few. And then of course there's the eternal **discussion** about the terms **tremolo** and **vibrato** which guitarists have been having since the beginning of time (that is, sometime in the 1950's).

Here's the big answer to these big questions: in principle, tremolo and vibrato are two different effects. Tremolo, an effect from the 60's, involves adjustable fluctuations in volume, whereas vibrato is a fluctuation in pitch. Therefore, a case could be made for vibrato being the proper term. **BUT**, when Leo Fender, the inventor of the spring tremolo system, registered the patent for this device on April 10th, 1956, he named it "synchronized tremolo". So from a legal standpoint this is actually the correct name. For many years this tremolo was the only available, more or less stable system (as far as keeping in tune). Used by artists like **Hank Marvin** (Shadows), **Jeff Beck** and of course **Jimi Hendrix** it shaped sound and style of the times.

Eddie van Halen's radical application of the tremolo in the late 70's, however, increased the demand for a more stable design, which **Floyd Rose** then met with his invention of a locking clamp system for the strings, at both the nut and the bridge. Despite a number of alternative systems this design has done well on the market and is now standard equipment on most strat-model guitars. But now let's move on to the different playing techniques made possible by the tremolo. I'd recommend setting it up so that you can raise the pitch as well as lowering it, thus giving you the widest range of playing possibilities. If you break a string with this set-up, though, all the other strings will go sharp.

THE VIBRATO

Beside the numerous ways of producing vibrato with your left hand, you can also make a very controlled and beautiful vibrato with the tremolo arm. It is, by the way, the only vibrato technique with which you can lower the pitch. The intensity of the vibrato is determined solely by your own taste. Important here is that the intensity gradually increases. This will sound a lot more musical than going into it full tilt.

Here are three examples for the use of the vibrato arm:

Exercise 50



	a) à la Beck	b) à la G. Moore	c) à la Vai
T	8	8	8
A			
B			
E			

By the way, you can get this fine, Beck-style vibrato more easily with a conventional spring tremolo than with a locking system.

THE DIVE BOMB EFFECT

The classic tremolo effect is surely the crash dive one used frequently by **Hendrix** and **van Halen**. The best way to get this sound is to strike the low E string with the left hand and press down on the tremolo arm until the string lies totally slack on the pick-ups.

This effect also sounds very good with harmonics on the G string. (For information on the resulting interval, see chapter 13, pg. 118).

Exercise 51

45
CD INDEX

Here it's important to keep the unplayed strings under control to keep them from making unwanted noise. Here's a trick for this:

If you mute all the unplayed strings with your left hand and radically lower the strings with the tremolo arm, the string that you want to play will probably be pulled so strongly by the magnetism of the neck pick-up poles that it remains "glued" to it until you release the arm, at which point it will pull away from the pick-up and ring out.



WANG BAR DIPS

Another frequently used tremolo arm technique is the so-called wang bar dip. The best way to do this is to fix the arm so that it stays in one place, not hanging loosely in **van Halen** fashion. Now press the arm lightly and let it return to position immediately. This way you glide into the note. Incidentally, this technique is often used by guitarists like **Steve Vai**, **Gary Moore** and **Joe Satriani**. **Vai** and **Satriani** often pull the arm in the other direction, producing a koto-like, Far-Eastern sound. In combination with the exotic scales from chapter 16, pg. 153, you could come up with some pretty interesting sounds.

Here are a few examples of this technique:

Exercise 52

45
CD INDEX

Exercise 52 consists of two parts, (a) and (b), each with a standard musical staff and a corresponding guitar tablature staff. Part (a) shows a sequence of notes with fingerings (1, 8, 5, 7, 5) and techniques like W/B (with bend) and P (pull-off). Part (b) continues the sequence with similar techniques and fingerings, including triplets (3) and a final 'etc.' indicating the pattern can continue.

LEGATO PHRASING WITH THE TREMOLO ARM

In the early 70's, when the use of the tremolo arm (other than for sound effects) was relatively unpopular, guitarists like **Allan Holdworth** and **Jeff Beck** developed a playing technique which gave the guitar sound a more fluid, saxophone-like quality. This technique involves sliding into the note by lowering the tremolo arm a little before hammering on with the left hand and then letting it return slowly to its resting position.

This sounds much harder than it really is.

Here's a lick illustrating this technique:

Lick 77

45
CD INDEX

Lick 77 is a musical phrase in A minor (Am¹¹). It consists of two measures. The first measure shows a sequence of notes with fingerings (1, 8, 7, 6, 5, 8, 12, 8, 10, 10) and techniques like W/B (with bend), P (pull-off), and H (hammer-on). The second measure continues the sequence with similar techniques and fingerings, including triplets (3) and a final 'etc.' indicating the pattern can continue.

Other guitarists who frequently use this technique are **Vinnie Moore** and **Alan Murphy** (see discography).

MELODIES WITH THE TREMOLO ARM

The next technique is often used by Steve Vai: making melodies with the tremolo arm.

Here he produces different tones by a controlled relaxation of the string with the wang. This works best with the harmonics on the G string.

As every tremolo system and every guitar responds differently to the pressure of the right hand, this technique requires a lot of sensitivity and finesse. So don't get discouraged if your first attempts sound more like yowling cats than music. If you've set up your tremolo so that it floats (so that you can raise the tone as well as lower it), experiment with getting notes by pulling up on the arm. This is, in my opinion, even easier than hitting lower notes exactly.

Here's a lick using this technique:

Lick 78



Em⁷

WB

A tip for recording with this technique: these melodies sound particularly good when doubled and given some echo.

WHAMMY BAR EFFECTS

Lick 79



Lick 79 a

Beside the different dive-bomb effects, there are a number of others which you can get from the wang bar. Here are my favorites:

1. The Horse Whinny

Anyone who's heard David Lee Roth's first solo album with Steve Vai knows what I mean. This sound is a dive bomb with a harmonic; you have to shake your right hand a bit while relaxing the strings with the tremolo arm.

W/B

Lick 79 b

2. The "Ruler" Sound

At one time or another, you've probably let a held-down ruler slap against a table top. This trick works similarly, just with the tremolo arm instead of a ruler. You can hear this sound on a few Steve Vai recordings, as well as on records from Night Ranger with Brad Gillis.

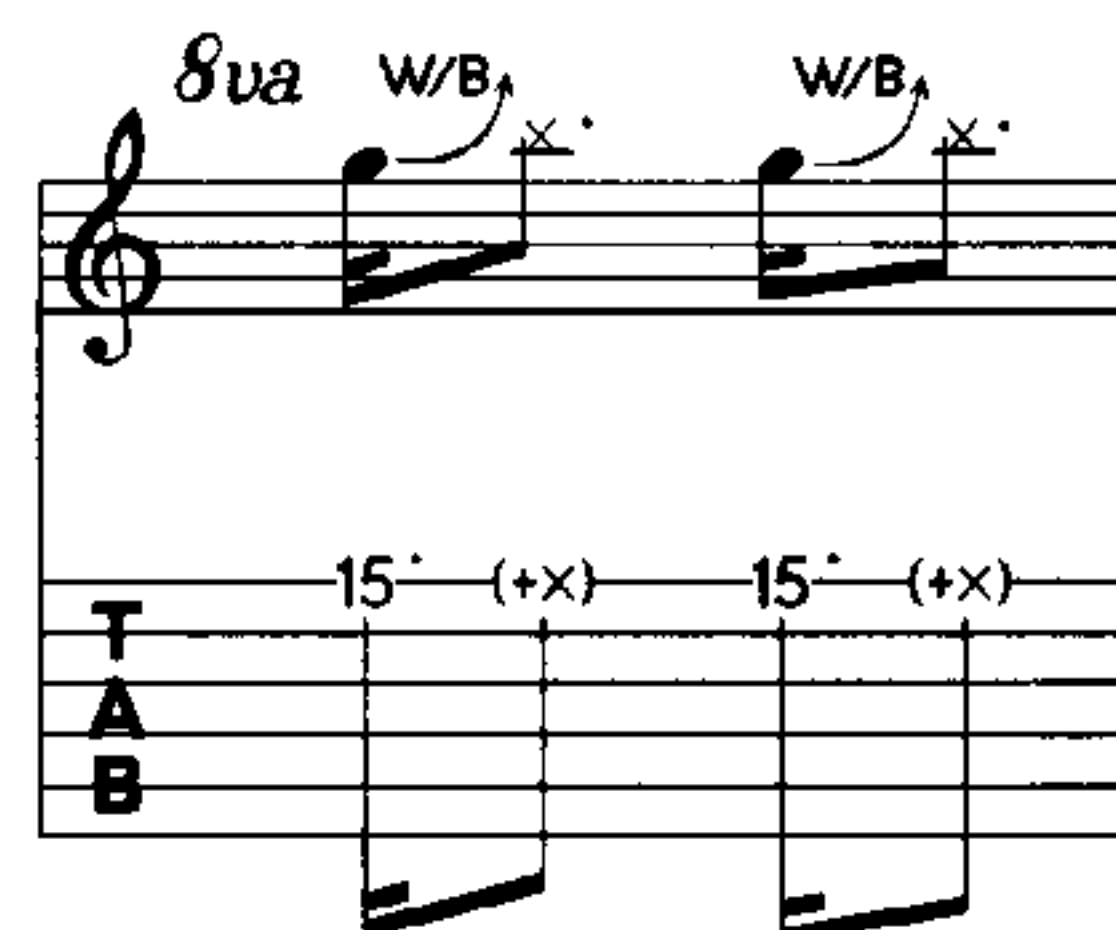
H

W/B

3. The Mouse Trap

Again, only for those with a floating set-up. Pull the arm backwards while playing so that the strings fret out on the neck or on the bridge pick-up.

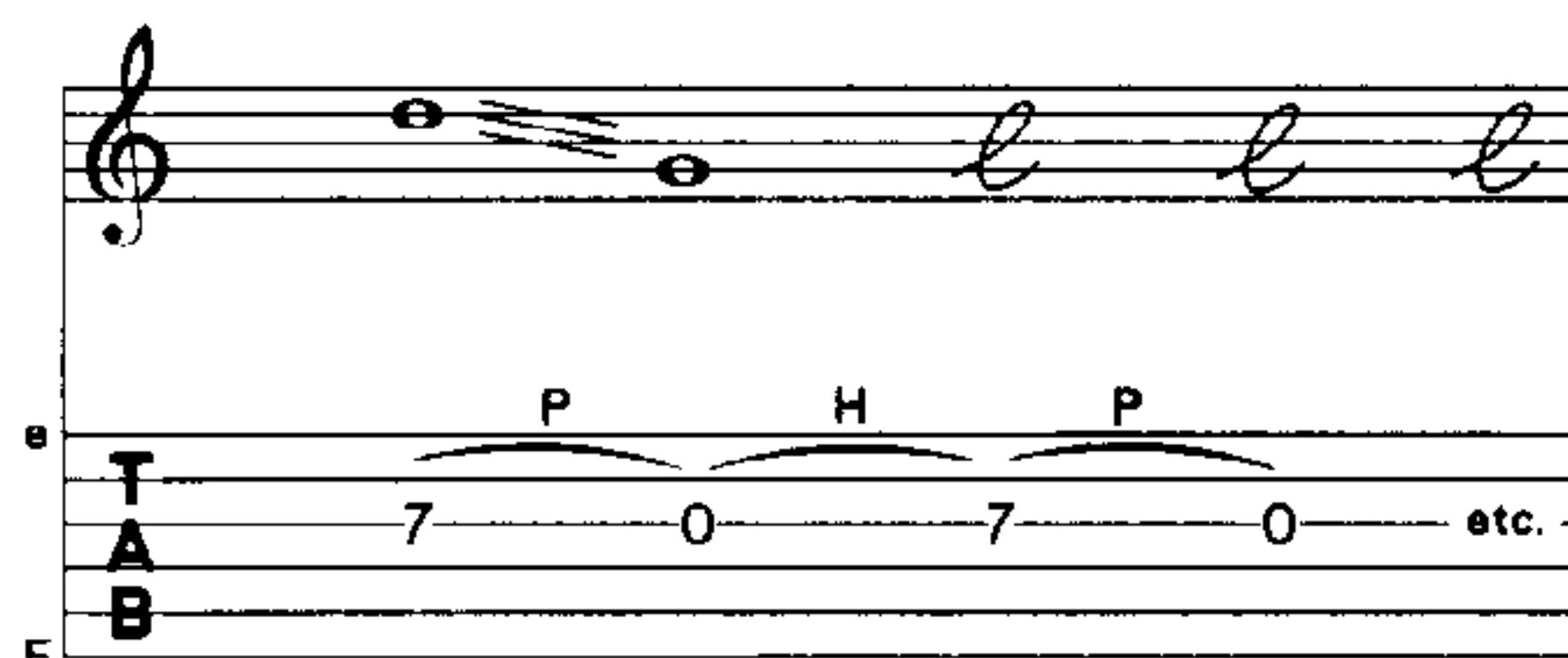
Lick 79 c



4. The Windmill

Play a tremolo with an open string and rotate the arm 360 degrees.

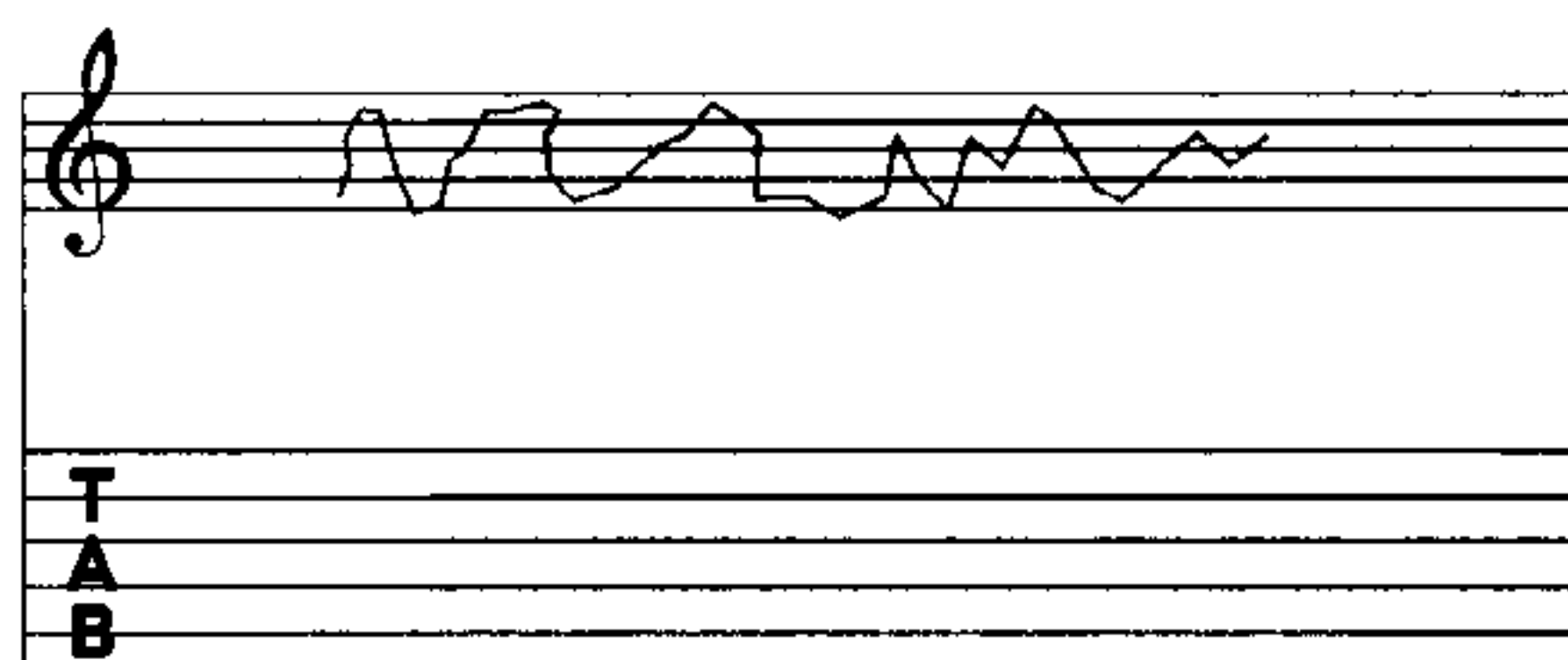
Lick 79 d



5. The Talk or Off-Pitch Effect

Move the whammy bar randomly up and down and try to imitate the sound of a spoken phrase or sentence. A wah-wah helps enormously here.

Lick 79 e

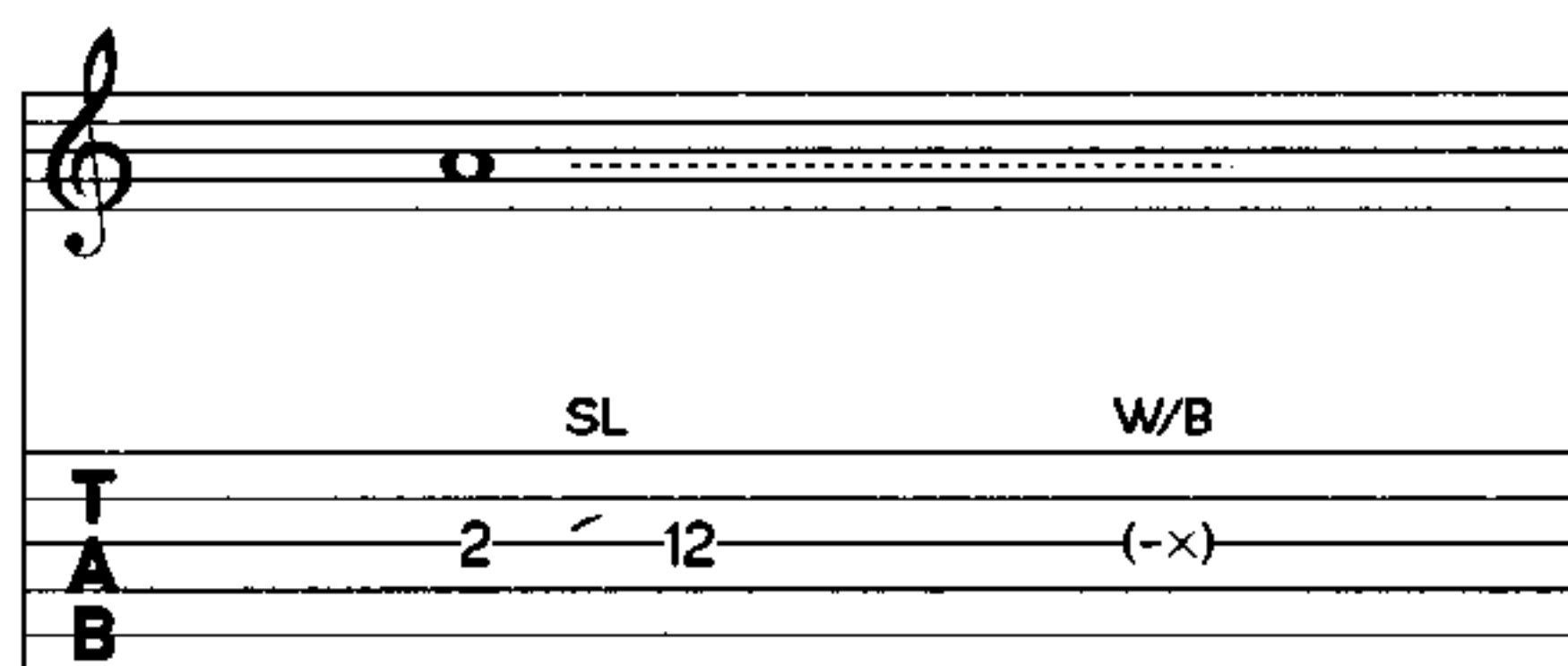


6. The Cat In Heat

Fret an A note on the G string at the 2nd fret and slide up the neck. At the same time, press down on the tremolo arm, trying to keep the pitch at A.

Warning: Under no circumstances should you practice this sound in spring!

Lick 79 f



TIP:

You can find more licks with whammy bar effects in my book "Masters of Rock Guitar" in the chapters on the following guitarists:

Jeff Beck – Lick 8, 10, 14 (pg. 50, 52); **Randy Rhoads** – Lick 13 (pg. 108);

Yngwie Malmsteen – Lick 13, 14 (pg. 118+119); **Gary Moore** – Lick 6 (pg. 124);

Steve Lukather – Lick 15 (pg. 131); **Joe Satriani** – Lick 13 (pg. 139);

Steve Vai – Lick 5, 11 (pg. 144, 147).

Chapter 18

EFFECTIVE LEARNING PLANNING YOUR PRACTICING

So, that's just about it for my **"Rock Guitar Secrets"**.

But, as I said, "just about", because in this chapter I'd like to talk about effective practicing again. By itself, the information in the first 17 chapters is only half the story.

So how does one deal with such a heap of information without getting frustrated right from the start?

If you ask me, I'd say that three things play a major role: **Desire, Persistence, and Patience**. These three terms are, for me, inseparably connected. Without the desire to get better on the guitar, you'd probably never have the patience to practice persistently.

And persistent practicing is, in my opinion, best maintained by means of a practice plan. And what should such a plan consist of?

That's a good question! It's important for you to be aware of your long and short-term goals- for example, your ideal notion of what your playing should be like (**long-term goal**), and the steps that must be taken in order to reach this goal, such as scale material, playing techniques to form your style (**intermediate goals**) and further breakdowns into single licks and exercises (**short-term goals**). These can be broken down even further into units as small as you like. Besides this, I also find it important to do the required exercises in addition to the things you practice just because they're fun.

Another thing that can be said about practicing plans is that they're only beneficial to you when you really stick to them for a longer period of time. For this reason it's very important to be realistic about the amount of practice time at your disposal, and not to cram this space too full. The more honest you are with yourself, the better. A 7-hour-a-day plan with hundreds of exercises is, in fact, more apt to lead to frustration than anything else because it's practically impossible to maintain over a long period of time.

For this reason, I'd say that 2-3 hours a day, 4 or 5 days a week is already quite a lot of time. Of course, when I speak of 2-3 hours, I mean really concentrated practicing, and not two hours of jamming around. That's a lot, believe me. And persistent practicing really pays off in the long run. Tapping for 10 minutes a day brings better results than a 5-hour non-stop tapping marathon followed by a 3-week pause.

With these things in mind, I've put together a practice program that I think is very effective and which contains many important aspects like warm-ups, scales/theory, playing techniques and music-making.

Even if you haven't mastered every exercise yet, you should try to stick to the general plan.

Section 1 - Warm-Ups

20 minutes Warm-up program before every practice session!

Section 2 - Technique/Theory

10 minutes Pentatonic scales, a different exercise each time

3 groupings > fourths - fourths 2 - fourths in triplets
4 groupings

10 minutes Modal scales, again a different exercise each time

4 groupings > seconds - thirds - sixths - other sequences

10 minutes Other scales with different sequences, etc.
Harmonic minor - melodic minor
diminished - whole tones - other

- Short break - Don't play - Relax!

10 minutes Arpeggios - arpeggiated songs - projects - etc.

Section 3 - Playing techniques

10 minutes String bending/vibrato Exercises, licks, etc.

10 minutes Alternate picking "

10 minutes Economy picking "

10 minutes Legato technique "

10 minutes Two-hand tapping "

- Short break (see above)

Section 4 - Playing written music

15 minutes working with written music
(transcriptions, licks, learning songs, etc)

Section 5 - Improvisation

15 minutes Improvising over blues - modal chord progressions,
songs - projects - etc.

Including breaks, this practice program is about 2 1/2 hours long. Of course this plan is not carved in stone; it can and should be modified regularly. This plan is already pretty long for a musician who's got a day job - sitting down to practice after a day's work is definitely not easy. This program does, however, contain practically all of the aspects of this book. If you can't manage this much time, there are a few alternatives. One would be to reduce each exercise by a few (but not too many!) minutes.

Another possibility, and, by the way, a very good one, is to make a long list of what you want to learn and accomplish over a longer period of time (6 months - 1 year) and then systematically divide up your time. As an example, your plan might look like this: in the first two months, concentration on picking technique, blues soloing, and transcription. followed later by more legato technique, improvisation over modal chord changes, and learning the rhythm guitar parts on all of the van Halen LP's. The main thing is that you stick to the overall plan and practice regularly.

To avoid getting too technical, you should try to favor more musical and creatively-oriented exercises. Assuming that there are no further questions about scales or arps, you could sacrifice some time on the technical section in favor of the following exercises and insert the latter as a block between sections 4 and 5:

PROJECT:

- It's often frustrating when your own licks don't sound good or interesting enough. Here's a project for "unfrustrating yourself" (unfortunately, it's not possible without a tape recorder). Set the recorder at half speed or turn the pitch control to the lowest possible setting. For the best results, take a background and play licks you know on top of it, relatively slowly, but also play randomly constructed, freely improvised licks with lots of chromatic passing tones and wide interval skips. When you listen to the recording you should set it back to normal (or even double) speed. What you're hearing are YOUR OWN licks at the official speed. Now your only task is to narrow the "speed gap".
- As they say: "The difficulty is in the limitation". Record about 15 minutes of totally unconnected chords of every type (or, even better, have another guitarist or instrumentalist play them). Now choose a string, restrict yourself to a space of about 5 to 7 frets, and play a solo. Pay particular attention to tensions/clashes as well as your phrasing.
- Record against a continuous drum beat alternating sections of rhythm guitar and identically long "rest" (no rhythm guitar) sections. During the rhythm guitar sections sing a phrase, during the rest section, play what you've sung. Pay attention to your timing!

Although these musical experiments may sound a bit weird and are guaranteed to produce a whole bunch of "strange" tones, my experience has shown that they're very useful for getting into your own creative sources and getting away from the musical statements of others.

Remember:

Be wild, but don't hurt yourself!

Chapter 19

IMPROVISATION CONSTRUCTING SOLOS

Although a whole book could be written on the subject of improvising and soloing, there is no standard recipe for a tear-it-up solo. Solo improvisation is a very individual thing. In every case it's about finding something new, something that the song needs. Despite, or perhaps because today's commercial music, be it pop, trash, etc., travels a pretty well-worn path, similar-sounding and similarly constructed solos can be heard again and again. To avoid getting lost in this rather complex area, I've attempted to find terms for these types of solos and to assign well-known solos to these groups.

1. The Pop Song Concept Solo

Good examples of this would be:

- "Rosanna" (1.Solo in the middle of the song, TOTO – IV, **Steve Lukather**)
- "Maniac" (Michael Sembello, Flashdance Soundtrack)
- "Living on a prayer" (Bon Jovi – Slippery when wet, **Richie Sambora**)
- "Rebel Yell" (Billy Idol – Rebel Yell, **Steve Stevens**)
- "Hello" (Lionel Ritchie – Can't slow down, **Paul Jackson Jr.**)

2. The Hard Rock Solo

In this category I would include:

- "Big trouble" (David Lee Roth – Eat them and Smile, **Steve Vai**)
- "Get the funk out" (Extreme – Pornograffiti, **Nuno Bettencourt**)
- "Beat it" (Michael Jackson – Thriller, **Eddie van Halen**)
- "Addicted to that rush" (Mr. Big – "1" , **Paul Gilbert**)
- "Satch Boogie" (**Joe Satriani** – Surfing with the alien)

3. Extended Improvisation

The following songs come to my mind:

- "Rosanna" (TOTO - IV, the ride-out solo at the end)
 - "Kree Nakoorie" (Alcatrazz – No parole from Rock & Roll, **Yngwie Malmsteen**)
 - "In the dead of the night" (U.K. – "1" , **Allan Holdsworth**)
 - "Call it sleep" (**Steve Vai** – Flex-able)
- ...and basically all solos on jazz and fusion records.

I suggest getting hold of all these songs and maybe even learning them note-for-note. With all of the solos in a given category the effect and function is the same, which makes them relatively easy to analyze. So let's take a look at the different approaches and procedures in each of the categories.

THE POP SONG CONCEPT SOLO

Used on: pop songs and ballads.

The goal of this type is to create a solo which is inseparable from the song, and which sounds good and beautiful.

A flashier solo would be too conspicuous for that kind of song. So it has to be easily recognizable and, if possible, the listener should be able to sing along with it. This can be accomplished by playing in a very chordally-derived manner (arpeggios!) and, optimally, rhythmically precise and easily understandable. Here, technique should play a subordinate role and should not be more than the icing on the cake. It's far more important to play "for" the song. This often means playing less notes, but placing and phrasing them optimally.

Which exercises would be good for this?

For rhythmic precision, for example, the rhythm pyramid from chapter 6, pg. 48. To make a solo more singable, practice singing the melody, then "sing" it on the guitar with guitaristic phrasing nuances like bends, slides, vibrato, etc. This way you'll stay melodic and sound "guitar-ish" at the same time.

To get away from the constant "scale doodling" and get into playing melodies, it helps to sing intervals. To do this, of course, you have to recognize the different intervals. I find this is most easily done by remembering the beginnings of well-known hits. Here is a brief list:

Interval

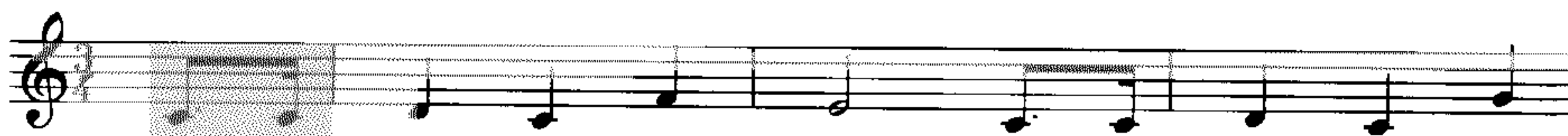
Notes

Song

prime

c – c

Happy Birthday



minor second

c – db

White Christmas



second

c – d

Happy Birthday



minor third

c – e \flat

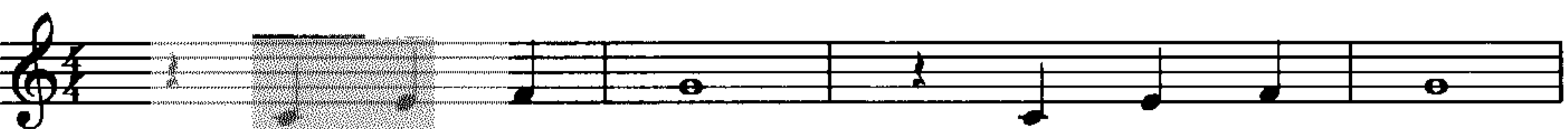
Smoke on the water



major third

c – e

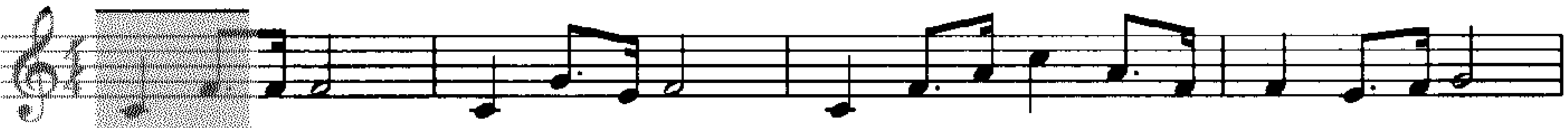
Oh when the saints



fourth

c – f

Wedding march



diminished fifth

c – g \flat

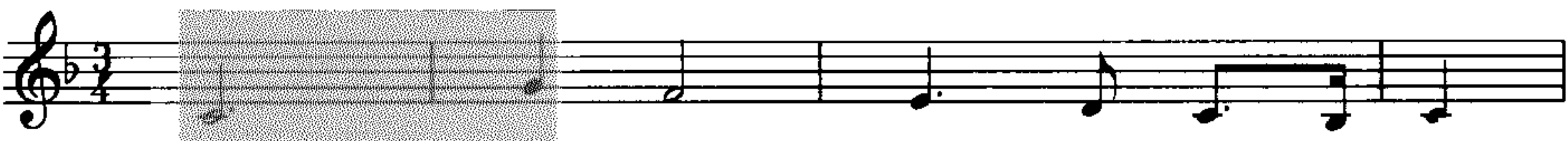
Maria



fifth

c – g

Moon river



minor sixth

c – ab

Love story



major sixth

c – a

My Bonnie is over...



minor seventh

c – bb

Star Trek theme



major seventh

c – b

I've got no idea for this interval

octave

c – c'

Somewhere over the rainbow



THE HARD ROCK SOLO

Used on: rock songs, disco/funk, hard rock, heavy metal

This type of solo often involves showing off the virtuosity of the band's guitarist(s).

They contain lots of licks and tricks that require practice and technical experience. These solos are virtually unsingable for the average consumer (at least I've yet to meet someone who can whistle van Halen's solo on "Beat It" note for note) and more lick and technique-oriented than melody-based. They are often freely improvised to a degree and not completely "preconceived" like pop song solos, though they almost always contain worked out passages or "killer licks", like Nuno Bettencourt's "Get the Funk Out". Even exceptional guitarists like Bettencourt don't play licks like the tapping passage in the middle of this solo off the cuff. It has also become usual in the hard rock genre to record a number of solos on different tracks, pick out the best parts of each and assemble the pieces to get an almost perfect solo. This was the case with "Jump" and "Enter Sandman" (Metallica), among others. So a lot of tricks are also used in (or should we say particularly in) these mega-productions. And the "secrets" of a perfect solo are mainly technical in nature.

As an exercise for this kind of solo, I'd recommend that you learn as many licks as possible, practice your technique and then try to combine the licks with improvised material.

EXTENDED IMPROVISATION

Used on: Sessions, solos on fade-Out

Improvisation means to me the spontaneous reorganization of known material. Licks, phrases, sounds, etc. that you've played or practiced are spontaneously mixed together to form something new.

An improvisation gives the soloist the opportunity to really cut loose and to let his thoughts and ideas flow freely.

The components of this musical freedom are looser form and more independence. So this is not about having 16 bars in which to play a slick pop solo. In good improvisations the soloist uses dynamics, motifs, licks and spontaneous ideas to build up intensity often culminating in musical (and hopefully physical, as well) ecstasy. Anyone who has ever jammed with another musician knows what I mean.

How to practice this?

Start with jamming a lot!

THE PYRAMID OF INTENSITY

This could be another good idea:

In chapter 6, pg. 56, you made the acquaintance of the rhythm pyramid.

What would happen if, parallel to this, you built an "intensity pyramid"? (This is a do-it-yourself book!) That might be constructed in a way that for every new rhythmic level there would be a dynamic indication (from very quiet to pedal-to-the-metal) and/or an expressive notation with which you would indicate what you feel is the appropriate playing and phrasing technique (from "acoustic" level, picked with the fingers, to brutal whammy-bar ecstasy). Hmmm ... food for thought. By the way, as a source of inspiration for this sort of improvisational approach, I highly recommend Steve Vai's column in *Guitar Player*.

GO FOR IT!!

APPENDIX

Discography and Reference Sources

To finish up; I'd like to offer a comprehensive view of records, books, videos and magazines that have helped me in my musical progress and in which you can find more information about the guitarists that I've covered in this book and in "Masters of Rock Guitar".

- Jennifer Batten:
 - REH Hotlines "Two-Hand Rock" (Book + Tape)
 - Columns in "GUITAR" (3/88-3/90) and "GUITAR PLAYER" (since 4/90)
- Reb Beach:
 - with Winger "I", "In the heart of the young"
 - Columns in "GUITAR WORLD" (7/89-5/90)
 - Tutorial Video by DCI
- Jeff Beck:
 - diverse Solorecords and as a Side-man
 - Tip: "Blow by Blow", "Wired", "Guitar Shop"
- Nuno Bettencourt:
 - with Extreme "Extreme", "Pornograffiti"
- Larry Carlton:
 - diverse Solorecords
 - Tip: "Strikes Twice", "Last Nite"
 - Tutorial Video by Starlicks
- Eric Clapton:
 - "Backtracking" and "Crossroads" (Sampler)
- Warren DiMartini:
 - Ratt "Ratt and Roll" (Greatest Hits)
- Robben Ford:
 - "The Inside Story", "Talk to your Daughter"
 - two tutorial videos by REH
 - REH Hotlines "Blues" (Book and Tape)
- Marty Friedman:
 - Cacophony "Go Off", Megadeth "Rust In Peace"
 - Tutorial Video by Hot Licks
- Frank Gambale:
 - diverse Solorecords and records with Chick Coreas Electric Band
 - Tip: "A Present For the Future"
 - two tutorial videos by DCI
 - "F. G. Technique Book" 1 and 2 (with Tape), DCI
 - "Speed Picking" (Book and Tape), REH
 - Columns in "GUITAR WORLD" (10/88-9/89) and "GUITAR PLAYER" (since 11/89)
- Dan Gilbert:
 - "Mr. Invisible"
- Paul Gilbert:
 - with Racer X: "Street Lethal", "Second Heat", "Extreme Volume", with Mr. Big "I", "Live-Raw Like Sushi", "Lean Into It" and "Bump ahead"
 - two tutorial videos by REH
 - Columns in "GUITAR PLAYER" (since 2/90)
 - Songbooks with original transcriptions of the said Mr. Big records
- Brad Gillis:
 - diverse records with Night Ranger
 - Tip: "Dawn Patrol"
 - Tutorial Video by Starlicks
- Mick Goodrick:
 - The Advancing Guitarist (Book)
- Jan Hammer:
 - Solorecords, Theme for "Miami Vice"
- Scott Henderson:
 - records with Tribal Tech and as a Side-man for Chick Corea, Jeff Berlin, Zawinul Syndicate, and others
 - Tip: "Tribal Tech" and "Players" (with Jeff Berlin)
 - Tutorial Video by REH
 - Columns in "GUITAR WORLD" (1/90-11/90)
- Jimi Hendrix:
 - "Are you Experienced?", "Axis: Bold As Love"

- Allan Holdsworth:**
- diverse Solorecords and recording sessions as a Side-man for Jean-Luc Ponty, Bill Bruford, U.K., Level 42, and others
 - Tip: U.K. "I", Bill Bruford "One Of A Kind", "Metal Fatigue" (Solo)
- Eric Johnson:**
- two Solorecords "Tones", "Ah Via Musicom" and Side-man for Steve Morse, Christopher Cross, Stuart Hamm and others
 - Tutorial Video by Hot Licks
- Stanley Jordan:**
- diverse Solorecords
- Albert King:**
- diverse Solorecords
- B.B. King:**
- diverse Solorecords
 - Tip: "Live at the Regal"
 - three tutorial videos by DCI
- Richie Kotzen:**
- diverse Solorecords
 - Tip: "Fever Dream"
 - Tutorial Video by REH
 - Columns in "GUITAR WORLD" (3/90-2/91)
 - Columns in "GUITAR SCHOOL" (since 7/91)
- Steve Lukather:**
- records with TOTO and as a sideman for uncountable artists
 - Tip: TOTO "Greatest Hits"
 - Tutorial Video by Starlicks
- George Lynch:**
- records with Dokken and Lynch Mob
 - Tutorial Video by REH
- Steve Lynch:**
- records with Autograph
 - Tutorial Video by REH
 - "The Right Touch" (Book and Flexi-disc) by Dale Zdenek
- Hank Marvin:**
- records with the Shadows
- Tony MacAlpine:**
- diverse Solorecords
 - Tip: "Maximum Security"
 - Tutorial Video by DCI
 - Columns in "GUITAR WORLD" (3/88-11/88)
- Yngwie Malmsteen:**
- diverse Solorecords and records with Alcatrazz
 - Tip: "No Parole From Rock'n'Roll" (Alcatrazz)
 - Tutorial Video by REH
- Kee Marcello:**
- with Europe "Out Of This World", "Prisoners In Paradise"
- Pat Metheny:**
- diverse Solorecords
 - Tip: "Off-ramp", "Live-Travels"
- Gary Moore:**
- diverse Solorecords and records with Thin Lizzy
 - Tip: "Run For Cover", "Still Got The Blues"
- Vinnie Moore:**
- diverse Solorecords
 - Tip: "Time Odyssey"
 - two tutorial videos by Hot Licks
- Steve Morse:**
- diverse records as a Soloartist and with The Dregs, The Dixie Dregs, Kansas and others
 - Tip: Dixie Dregs "Dregs of the earth"
 - one tutorial video each by REH and DCI
 - Songbooks with original transcriptions
- Alan Murphy:**
- records as a Side-man for Go West, Kate Bush, Level 42, Nick Heyward, Mike and the Mechanics
 - Tip: Go West "I"

- Carlos Santana:
 - diverse Solorecords
 - Tip: "Greatest Hits", "Viva Santana"!
 - Songbook with original transcriptions

- Joe Satriani:
 - diverse Solorecords and Side-man for Stuart Hamm, Alice Cooper and others
 - Tip: "Surfing With The Alien" (Solo)
 - Columns in "GUITAR WORLD" (4/88-11/88)
 - Songbooks with original transcriptions

- John Scofield:
 - diverse Solorecords
 - Tip: "Blue Matter"
 - Tutorial Video by DCI

- Mike Stern:
 - diverse Solorecords and as a Sideman for Miles Davis and others
 - Tip: "We Want Miles", "Upside Downside" (Solo)

- Steve Vai:
 - records with Zappa, Alcatrazz, David Lee Roth, PIL, Whitesnake, Alice Cooper and others
 - three Solorecords "Flex-Able", "Passion and Warfare" and "Sex and Religion"
 - Columns in "GUITAR PLAYER" (2/89-8/89)
 - Songbook with original transcriptions

- Eddie Van Halen:
 - ALL Van Halen records!!!!
 - Songbooks with original transcriptions

- Stevie Ray Vaughan:
 - diverse Solorecords
 - Tip: "Texas Flood", "In Step" and recordings as a Sideman for David Bowie, Jennifer Warnes, James Brown and others

- Jeff Watson:
 - diverse records with Night Ranger
 - Tip: "Midnight Madness"
 - Tutorial Video by Starlicks

- Zakk Wylde:
 - with Ozzy Osbourne "No Rest For The Wicked", "We Want Ozzy", "No More Tears"

Have fun while searching!

Magazines:

Rolling Stone
 Kerrang
 Metal Hammer
 Sound Check
 Guitar for the Practicing Musician
 Guitar Player
 Guitar World
 International Musician

Special Sign Index:

	Downstroke, pick downwards	(+x)	x steps higher
	Upstroke, pick upwards	(-x)	x steps lower
	Slide (Glissando), sliding towards target note		Rake, percussive stroke with muted strings
	Hammer On, hitting a string with lefthand fingers, without picking with the right hand		Flageolet, harmonic note
	Pull Off, quick lifting of lefthand fingers from a string without picking with the right hand		Flageolet, shortly behind third fret
	Bend Up, bending a string upwards	simile	Repeat same pattern
	Release Bend, releasing a bent string downwards	b.n.	Struck behind nut
	Small/Smear Bend, short bending upwards		Play with shuffle- i.e. triplet feeling
SRB	Slow release Bend, slow releasing of bent string downwards		Tremolo, repeat hitting the same string
T	Tapping, hitting strings on the fingerboard with right hand fingers		Major chord
TD	Tapping with thumb	8va	Play one octave higher than written
p.m.	Palm Muted, muting the strings with the right hand palm	16va	Play two octaves higher than written
g.n.	Ghost Note, left hand muted note	loco	Play in written pitch (usually after playing one or more octaves higher than written)
W/B	Whammy Bar, Vibrato Bar		Triplet, three notes that are played in the time of two notes of equal value
(-1)	A half step lower		Quintuplet, five notes to be played in the time of four notes of equal value
(+1)	A half step higher		Sextuplet, six notes to be played in the time of four notes of equal value